UX-465L/C
UX-485LU

SHARP SERVICE MANUAL

No. 00ZUX465L/SME

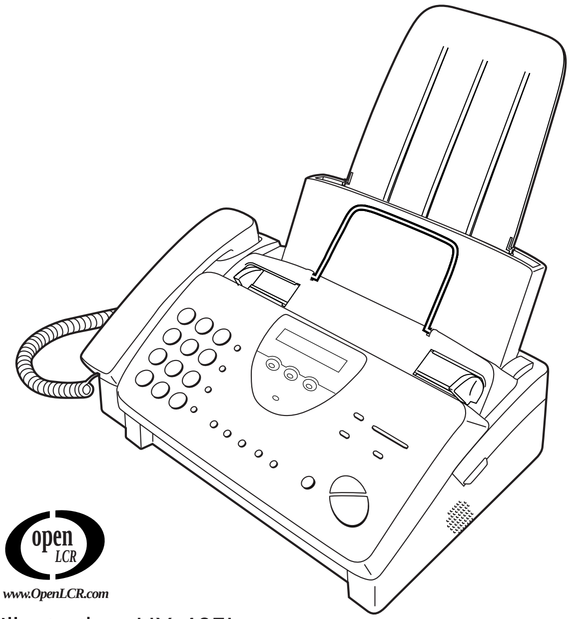


Illustration: UX-465L

FACSIMILE

UX-465L
UX-465
MODEL UX-485

SELECTION CODE	DESTINATION
UX-465L (Open LCR)	U.S.A.
UX-465C	Canada
UX-485LU	L.A.G. (120V)

CONTENTS

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

CAUTION FOR BATTERY REPLACEMENT

(Danish) ADVARSEL !

Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the equipment manufacturer.
Discard used batteries according to manufacturer's
instructions.

(Finnish) VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

(French) ATTENTION

Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type recommandé par le constructeur.
Mettre au rébut les batteries usagées conformément aux
instructions du fabricant.

(Swedish) VARNING

Explosionsfare vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German) Achtung

Explosionsgefahr bei Verwendung inkorrekter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

CHAPTER 1. GENERAL DESCRIPTION

[1] Specifications

Automatic dialing: (UX-465L)	Rapid Key Dialing: 4 numbers Speed Dialing: 40 numbers
Automatic dialing: (UX-465C/485LU)	Rapid Key Dialing: 5 numbers Speed Dialing: 40 numbers
Imaging film:	**Initial starter roll** (included with machine): 32 ft. (10 m)(approx. 30 letter-size pages) **Replacement roll:** **UX-3CR/NX-3CR** 98 ft. (30 m) roll (two rolls in package, one roll yields approx. 100 letter-size pages)
Memory size* :	512 KB (approx. 30 pages with no voice messages recorded and ECM turned off, or 24 minutes of voice messages (including OGMs) with no documents in memory)
Modem speed: (UX-465L/C)	14400 bps with automatic fallback to lower speed
Modem speed: (UX-485LU)	14400 bps with automatic fallback to 9600, 7200, 4800, or 2400 bps
Transmission time* :	Approx. 6 seconds (only when ECM is on)
Resolution:	Horizontal: 203 pels/inch (8 dots/mm) Vertical: Standard: 98 lines/inch (3.85 lines/mm) Fine/Halftone: 196 lines/inch (7.7 lines/mm) Super fine: 391 lines/inch (15.4 lines/mm)
Automatic document feeder:	10 pages max. (20 lb paper)
Recording system:	Thermal transfer recording
Halftone (grayscale):	64 levels
Display:	16-digit LCD display
Paper tray capacity: (16-to 20-lb. paper)	Letter: 60 sheets Legal: 30 sheets
Compression scheme:	MH, MR, MMR
Applicable telephone line:	Public switched telephone network
Compatibility:	ITU-T (CCITT) G3 mode
Scanning method: (UX-465C/485LU)	Sheet-feeder CIS (Contact Image Sensor)
Input document size:	Automatic feeding: Width — 5.8 to 8.5" (148 to 216 mm) Length — 5.5 to 11" (140 to 279 mm) Manual feeding: Width — 5.8 to 8.5" (148 to 216 mm) Length — 5.5 to 23.6" (140 to 600 mm)
Effective scanning width:	8.3" (210 mm) max.
Effective printing width:	8.3" (210 mm) max.
Contrast control:	Automatic/Dark selectable
Reception modes: (UX-465L/C)	TEL/FAX/TAD
Reception modes: (UX-485LU)	FAX, TEL, TEL/FAX, TAD
Copy function:	Single/Multi/Sort (99 copies/page)
Telephone function: (UX-465L)	Yes (cannot be used if power fails)
Telephone function: (UX-465C/485LU)	Standard (cannot be used if power fails)
Power requirements:	120 V AC, 60 Hz
Operating temperature:	41 to 95°F (5 to 35°C)
Humidity:	Maximum: 85 %
Power consumption:	Stand-by: 4.0 W Maximum: 100 W
Dimensions:	Width: 13.5" (343 mm) Depth: 10.1" (256 mm) Height: 7.2" (182 mm)
Weight:	Approx. 7.7 lbs. (3.5 kg)

* Based on ITU-T (CCITT) Test Chart #1 at standard resolution in Sharp special mode, excluding time for protocol signals (i.e., ITU-T phase C time only).

As a part of our policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specifications figures indicated are nominal values of production units. There may be some deviation from these values in individual units.

[2] Operation panel

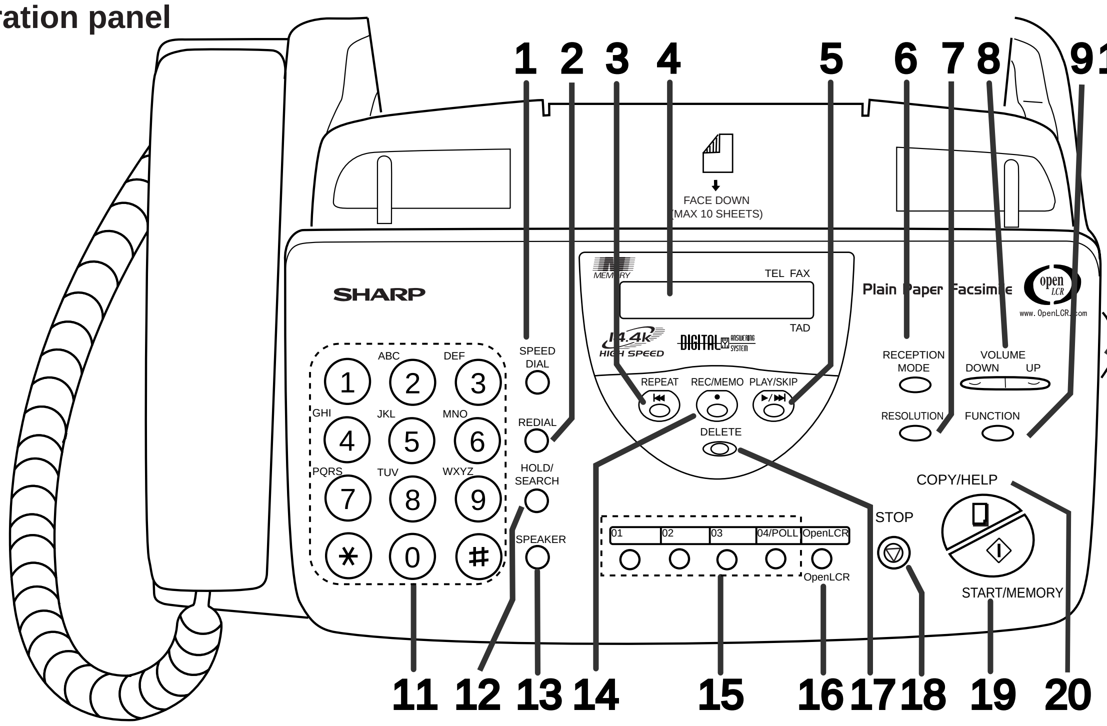


Illustration: UX-465L

1. SPEED DIAL key (UX-465L)
Press this key to dial a fax or voice number using an abbreviated 2-digit Speed Dial number.

1. SPEED DIAL key (UX-465C/485LU)
Press this key to dial a 2-digit Speed Dial number.

2. REDIAL key
Press this key to automatically redial the last number dialed.

3. REPEAT key
Press this key to repeat playback of a message.

4. Display
This displays messages and prompts during operation and programming.

5. PLAY/SKIP key
Press this key to play recorded message. During playback, press it to skip forward to the next message.

6. RECEPTION MODE key
Press this key to select the reception mode. An arrow in the display will point to the currently selected reception mode.

7. RESOLUTION key (UX-465L)
Press this key to adjust the resolution for faxing or copying.

7. RESOLUTION key (UX-465C/485LU)
Press this key to adjust the resolution and contrast before sending or copying a document.

8. VOLUME keys (UX-465L)
Press these keys to adjust the volume of the speaker when the **SPEAKER** key has been pressed, the volume of the handset when the handset is lifted, or the volume of the ringer at all other times.

8. VOLUME keys (UX-465C)
Press these keys to adjust the volume of the handset when the handset is lifted, the volume of the speaker when the **SPEAKER** key has been pressed, or the volume of the ringer at all other times.

8. VOLUME keys (UX-485LU)
Press these keys to adjust the volume of the speaker when the **SPEAKER** key has been pressed, or the volume of the ringer at all other times.

9. FUNCTION key
Press this key to select various special functions.

10. Panel release
Grasp this finger hold and pull toward you to open the operation panel.

11. Number keys (UX-465L)
Use these keys to dial numbers, and enter numbers and letters when storing auto-dial numbers.

11. Number keys (UX-465C/485LU)
Use these keys to dial numbers, and enter numbers and letters during number/name storing procedures.

12. HOLD/SEARCH key (UX-465L)
When dialing, press this key to search for an auto-dial fax number. During a phone conversation, press this key to put the other party on hold.

12. HOLD/SEARCH key (UX-465C/485LU)
Press this key to search for an automatic dialing number, or, during a phone conversation, press this key to put the other party on hold.

13. SPEAKER key
Press this key to listen the line and fax tones through the speaker when faxing a document.
Note: **This is not a speakerphone.** You must pick up the handset to talk with the other party.

14. REC/MEMO key
Press this key to record a phone conversation or a message.

15. Rapid Dial keys
Press one of these keys to dial a fax or voice number automatically. (Note that you must attach the Rapid Key labels.)

16. Open LCR key (UX-465L ONLY)
Press this key to register for Open LCR service and receive carrier rate data to your fax.

17. DELETE key
Press this key to erase recorded messages.

18. STOP key
Press this key to cancel operations before they are completed.

19. START/MEMORY key (UX-465L)
Press this key to begin transmission when using Speed Dialing, Direct Keypad Dialing, or Normal Dialing.

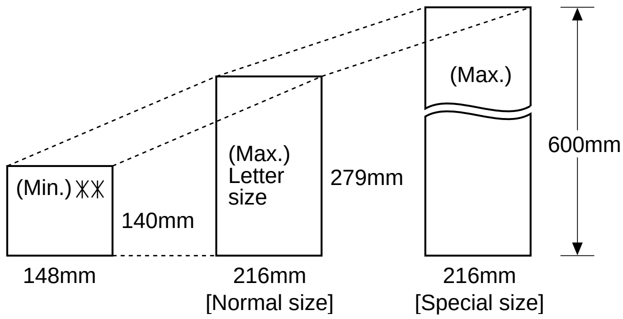
19. START/MEMORY key (UX-465C/485LU)
Press this key to send or receive a document, or to scan a document into memory before sending it.

20. COPY/HELP key
When a document is in the feeder, press this key to make a copy of a document. At any other time, press this key to print out the Help List, a quick reference guide to the opeation of your fax machine.

[3] Transmittable documents

1. Document Sizes

Normal size	width	5.8" - 8.5" (148 – 216 mm)
	length	5.5" - 11" (140 – 279 mm)



※※ Use document carrier sheet for smaller documents.

* With special sizes, only one sheet can be fed into the machine at a time. Insert next page into feeder as current page is being scanned.

2. Paper Thickness & Weight

	4x6 series (788mm x 1091mm x 1000 sheets)		Square meter series	
	Minimum	Maximum	Minimum	Maximum
Feeder capacity	10 sheets, max.			
Paper weight	45kg	64.3kg	52g/m^2	74.3g/m^2
Paper thickness (ref.)	0.06mm	0.09mm	0.06mm	0.09mm
Paper size	148mm x 140mm ~ A4 (210mm x 297mm), Letter (216mm x 279mm)			

3. Document Types

- Normal paper

  Documents handwritten in pencil (No. 2 lead or softer), fountain pen, ball-point pen, or felt-tipped pen can be transmitted.

  Documents of normal contrast duplicated by a copying machine can also be transmitted.
- Diazo copy (blue print)

  Diazo copy documents of a normal contrast may be transmitted.
- Carbon copy

  A carbon copy may be transmitted if its contrast is normal.

4. Cautions on Transmitting Documents

- Documents written in yellow, greenish yellow, or light blue ink cannot be transmitted.
- Ink, glue, and correcting fluid on documents must be dry before the documents can be transmitted.
- All clips, staples and pins must be removed from documents before transmission.
- Patched (taped) documents should be copied first on a copier and then the copies used for transmission.
- All documents should be fanned before insertion into the feeder to prevent possible double feeds.

5. Automatic Document Feeder Capacity

Number of pages that can be placed into the feeder at anytime is as follows:

Normal size: max. ADF 10 sheets

Special size: single sheet only (manual feed)

NOTES:
- When you need to send or copy more pages than the feeder limit, place additional pages in feeder when last page in feeder is being scanned.
- Place additional pages carefully and gently in feeder. If force is used, double-feeding or a document jam may result.

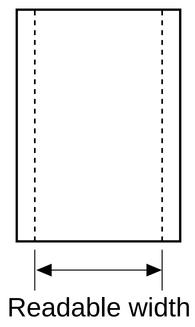
6. Readable Width & Length

The readable width and length of a document are slightly smaller than the actual document size.

Note that characters or graphics outside the effective document scanning range will not be read.

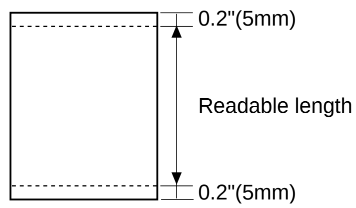
- **Readable width**

8.3" (210mm), max.



- **Readable length**

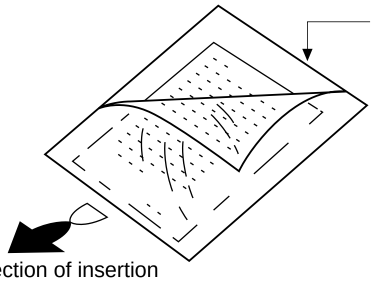
This is the length of the document sent minus 0.2" (5mm) from the top and bottom edges.



7. Use of Document Carrier Sheet

A document carrier sheet must be used for the following documents.

- Those with tears.
- Those smaller than size 5.8" (W) x 5.5" (L) (148mm (W) x 140mm (L)).
- Carbon-backed documents



NOTE: To transmit a carbon-backed document, insert a white sheet of paper between the carbon back of the document and the document carrier.

- Those containing an easily separable writing substance (e.g., tracking paper written on with a soft, heavy lead pencil).

NOTES:
- When using the document carrier, carefully read the instructions written on the back.
- If the document carrier is dirty, clean it with a soft, moist cloth, and then dry it before using for transmission.
- Do not place more than one document in the carrier at a time.

[4] Installation

1. Site selection

Take the following points into consideration when selecting a site for this model.

ENVIRONMENT

- The machine must be installed on a level surface.
- Keep the machine away from air conditioners, heaters, direct sunlight, and dust.
- Provide easy access to the front, back, and sides of the machine. In particular, keep the area in front of the machine clear, or the original document may jam as it comes out after scanning.
- The temperature should be between 5° and 35°C.
- The humidity should be between 30% and 85% (without condensation).

ELECTRICITY

AC 120V, 60Hz, grounded(3-prong) AC outlet is required.

Caution!

- Connection to a power source other than that specified will cause damage to the equipment and is not covered under the warranty.
- If your area experiences a high incidence of lightning or power surges, we recommend that you install a surge protector for the power and telephone lines. Surge protectors can be purchased at most telephone speciality stores.

If the machine is moved from a cold to a warm place...

Condensation may form on the reading glass if machine is moved from a cold to a warm place, this will prevent proper scanning of documents for transmission. Turn on the power and wait approximately 2 hours before using machine.

TELEPHONE JACK

A standard telephone jack must be located near the machine.
This is the telephone jack commonly used in most homes and offices.

- Plugging the fax machine into a jack which is not telephone jack may result in damage to the machine or your telephone system. If you do not know what kind of jack you have, or need to have one installed, contact the telephone company.

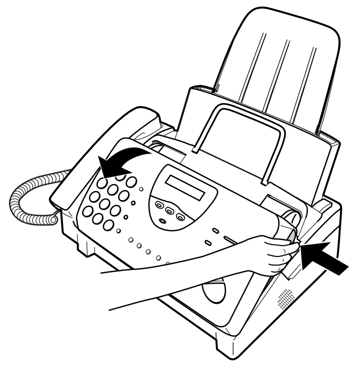
2. Loading the imaging film (UX-3CR/NX-3CR)

Your fax uses a roll of imaging film to create printed text and images. The print head in the fax applies heat to the imaging film to transfer ink to the paper. Follow the steps below to load or replace the film.

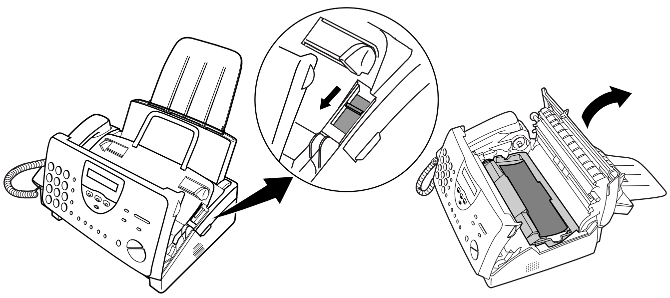
- The initial starter roll of imaging film included with your fax can print about 30 letter-size pages.
- When replacing the film, use a roll of Sharp UX-3CR/NX-3CR imaging film. One roll can print about 100 letter-size pages.

Note: If there is paper in the paper tray, pull the paper release plate forward and remove the paper before loading the imaging film.

① Open the operation panel by grasping the finger hold and pulling up.

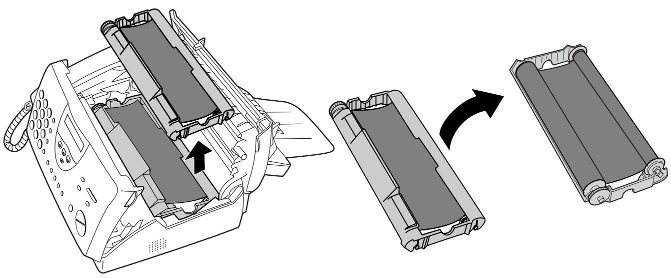


② Pull the green release on the right side of the machine forward, and open the print compartment cover.

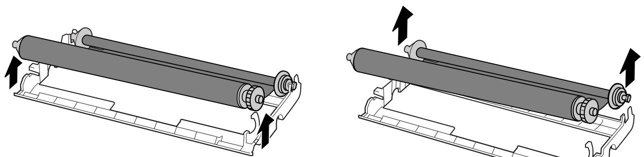


If you are installing the imaging film for the first time, go to Step 6.

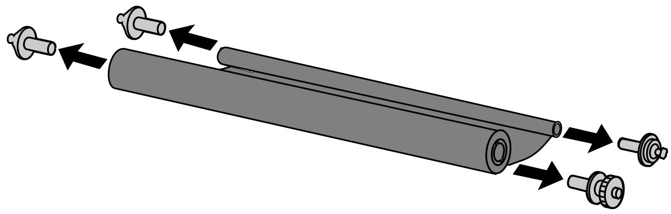
③ Remove the imaging film cartridge from the print compartment (grasp the handle at the front of the cartridge) and turn it over.



④ Remove the used film from the cartridge.

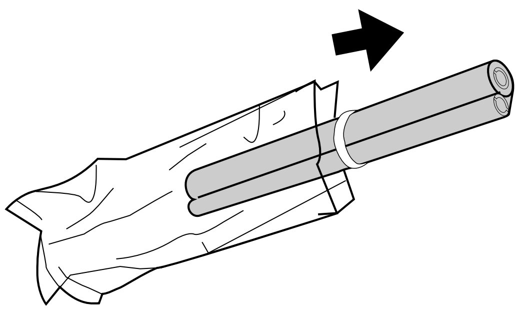


⑤ Remove the four green gears from the used film.
DO NOT DISCARD THE FOUR GREEN GEARS!



⑥ Remove the new roll of imaging film from its packaging.

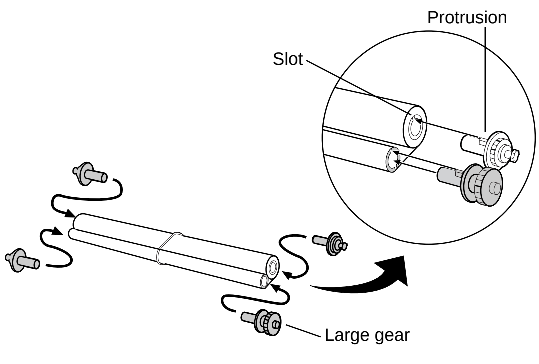
- Do not yet remove the band that holds the rolls together.



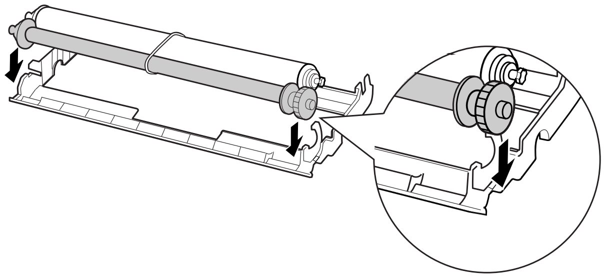
⑦ Insert the large gear into the green end of the empty spool. Make sure the two protrusions on the large gear fit firmly into the slots in the end of the spool.

Insert the remaining three gears into the spools, making sure the protrusion on each gear fits firmly into one of the slots in the end of each spool.

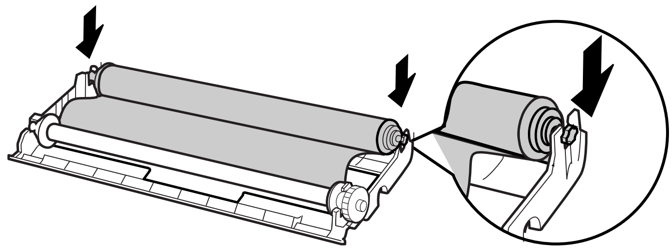
- If needed, pull the spools apart slightly to allow the gears to fit (the band will stretch).



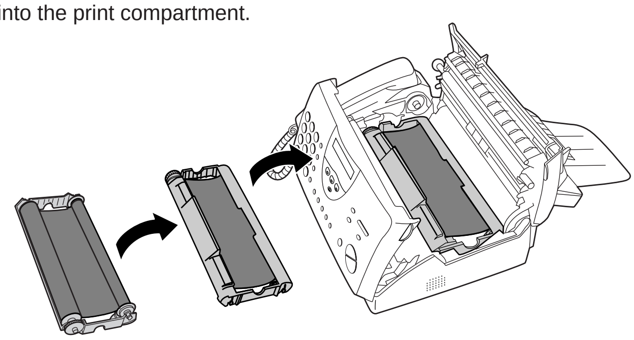
⑧ Insert the large gear into the large holder on the imaging film cartridge (make sure it clicks into place), and then insert the small gear on the other end of the spool into its holder.



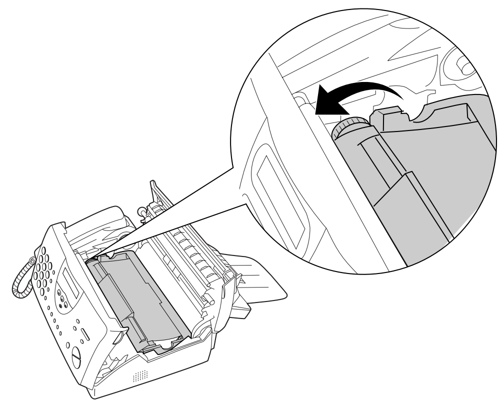
⑨ Cut the band that holds the two spools together. Unroll the film slightly and insert the small gears into their holders.



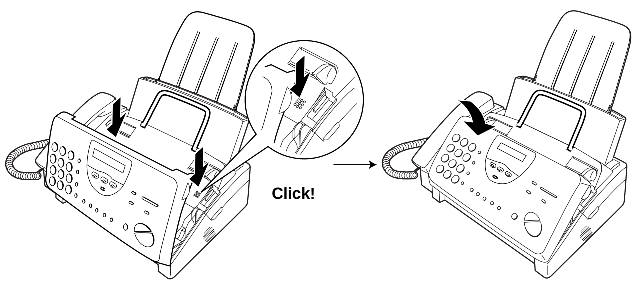
⑩ Turn the cartridge over, grasp the handle, and insert the cartridge into the print compartment.



⑪ Rotate the large gear toward you until the film is taut.



⑫ Close the print compartment cover (press down on both sides to make sure it clicks into place), and then close the operation panel.



⑬ Load paper in the paper tray and then press the following keys to initialize the film.

Note: Paper must be loaded before the film can be initialized. To load paper, see the following section, Loading Printing Paper.



When to replace the imaging film

Replace the imaging film when the display shows:

FILM END

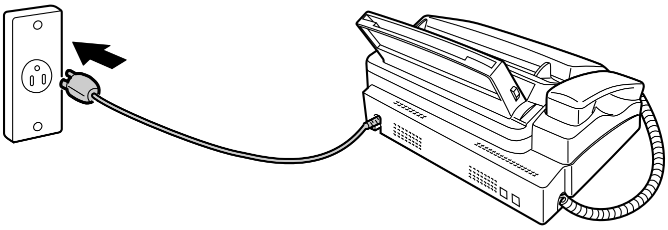
Use the following imaging film, which is available from your dealer or retailer: **Sharp UX-3CR/NX-3CR Imaging Film**

3. Assembly and connections

① Plug the power cord into a 120V, 60Hz, grounded(3-prong) AC outlet.

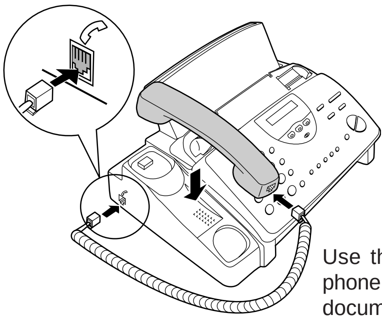
- **Caution**: Do not plug the power cord into any other kind of outlet. This will damage the machine and is not covered under the warranty.
- The machine does not have a power on/off switch, so the power is turned on and off by simply plugging in or unplugging the power cord.

Note: If your area experiences a high incidence of lightning or power surges, we recommend that you install surge protectors for the power and telephone lines. Surge protectors can be purchased at most telephone speciality stores.



② Connect the handset as shown and place it on the handset rest.

♦ The ends of the handset cord are identical, so they will go into either jack.

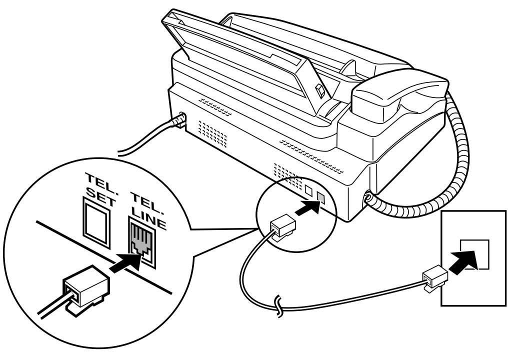


Make sure the handset cord goes into the jack marked with a handset symbol on the side of the machine!

Use the handset to make ordinary phone calls, or to transmit and receive documents manually.

③ Insert one end of the telephone line cord into the jack on the back of the machine marked **TEL.LINE**. Insert the other end into a standard (RJ11C) single-line wall telephone jack.

Be sure to insert the telephone line cord into the **TEL.LINE** jack. **Do not** insert into the **TEL.SET** jack.



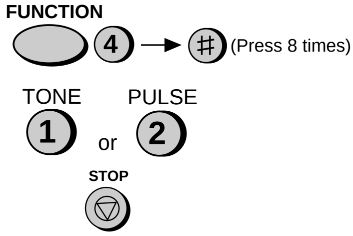
Note (UX-465L ONLY): The fax machine is set for tone dialing. If you are on a pulse dial line, you must set the fax machine for pulse dialing.
Press the keys on the operation panel as follows.

(UX-465L ONLY)
1. Press these keys :

   The display will show:
   DIAL MODE

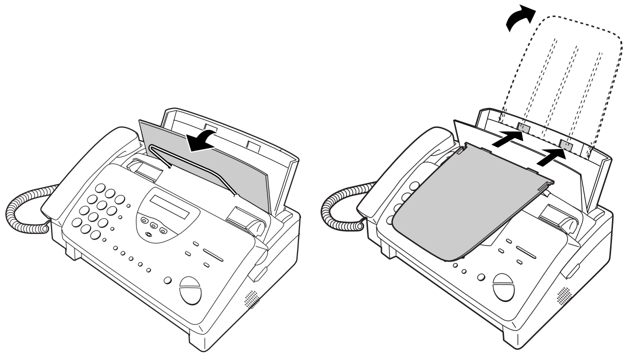
2. Press **1** to select tone dialing, or **2** to select pulse dialing.

3. Press the **STOP** key to return to the date and time display.



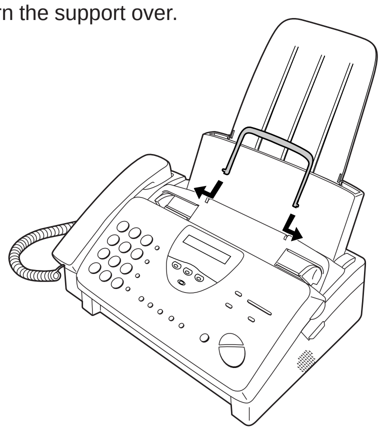
④ Attach the paper tray extension.

♦ Pull the paper release plate forward. Insert the paper tray extension horizontally into the notches in the paper tray. Rotate the paper tray extension up until it snaps into place.



⑤ Attach the original document support.

Note: The original document support has a top side and a bottom side. If you cannot insert the tabs on the support into the holes, turn the support over.



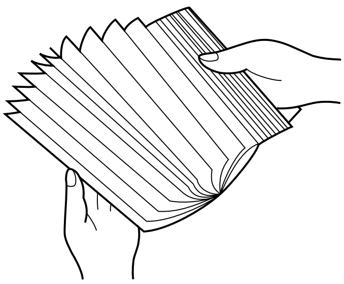
4. Loading printing paper

You can load letter or legal size paper in the paper tray. The maximum number of sheets depends on the weight and size of the paper you are loading.

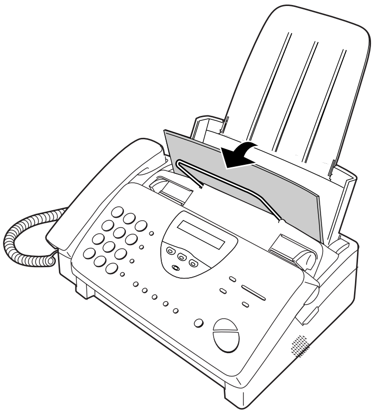
♦ Paper from 16 to 20 Ibs. (60 to 75 g/m^2):
Letter size: 60 sheets   Legal size: 30 sheets

♦ Paper from 20 to 24 Ibs. (75 to 90 g/m^2):
Letter size: 50 sheets   Legal size: 25 sheets

① Fan the paper, and then tap the edge against a flat surface to even the stack.



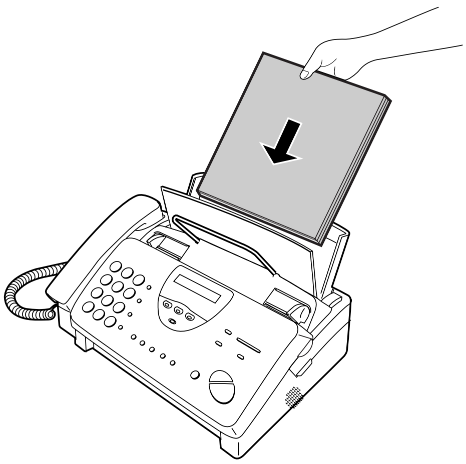
② Pull the paper release plate toward you.



③ Insert the stack of paper into the tray, **print side down**.

- If paper remains in the tray, take it out and combine it into a single stack with the new paper before adding the new paper.

Be sure to load the paper so that printing takes place on the **print** side of the paper. Printing on the reverse side may result in poor print quality.



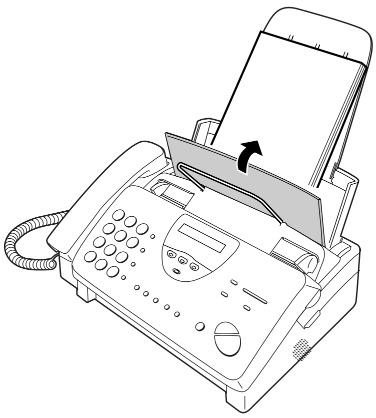
④ Push the paper release plate back down.

- If the paper release plate is not pushed down, paper feed errors will result.

Note: When receiving faxes or copying documents, do not allow a large number of pages to accumulate in the output tray. This may obstruct the outlet and cause paper jams.

Note: If the display shows the following alternating messages when making a copy or receiving a fax, check the paper tray. If the tray is empty, add paper and then press the **START/MEMORY** key. If there is paper, make sure it is inserted correctly and then press the **START/ MEMORY** key.

SET PAPER &
↓ ↑
PRESS START KEY



⑤ The fax has been set at the factory to scale the size of received faxes to letter size paper. If you have loaded legal paper, you must change the paper size setting to legal. Press these keys:

(UX-465L/C)
The display will show: PAPER SIZE SET — FUNCTION 6 → * *

Press **1** to select LETTER, **2** to select LEAGAL. — LETTER 1 or LEAGAL 2

The display will show: COPY CUT-OFF

Press the **STOP** key to return to the date and time display. — STOP

(UX-485LU)
The display will show: PAPER SIZE SET — FUNCION 6 → * *

Press **1** to select LETTER, **2** to select LEAGAL, or **3** select A4. — LETTER 1 or LEAGAL 2 or A4 3

The display will show: COPY CUT-OFF

Press the **STOP** key to return to the date and time display. — PARE

⑥ Your fax has been set at the factory to print at normal contrast.

Depending on the type of paper you have loaded, you may find that you obtain better print quality by changing the setting to LIGHT.

Press these keys:

The display will show: PRINT CONTRAST — FUNCTION 6 → * * *

Press **1** to select NORMAL or **2** to select LIGHT. — NORMAL 1 or LIGHT 2

The display will show: PAPER SIZE SET

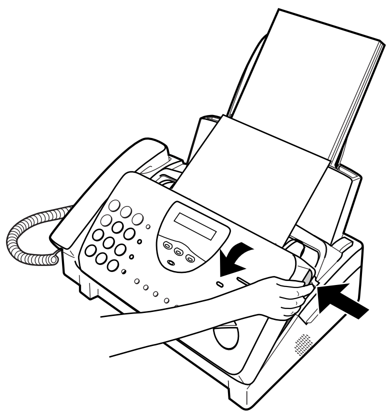
Press the **STOP** key to return to the date and time display. — STOP

5. Clearing a jammed document

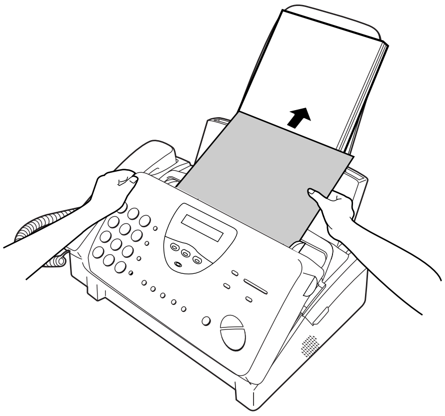
If the original document doesn't feed properly during transmission or copying, or DOCUMENT JAMMED appears in the display, first try pressing the **START/MEMORY** key. If the document doesn't feed out, open the operation panel and remove it.

Important:
Do not try to remove a document without opening the operation panel. This may damage the feeder mechanism.

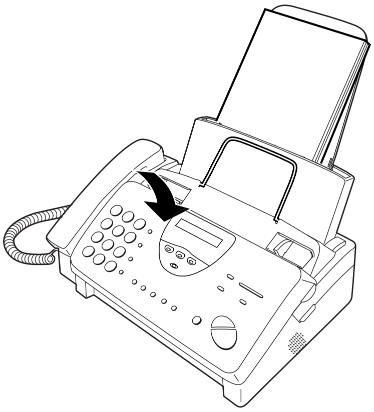
① Open the operation panel by grasping the finger hold and pulling up.



② Remove the document.

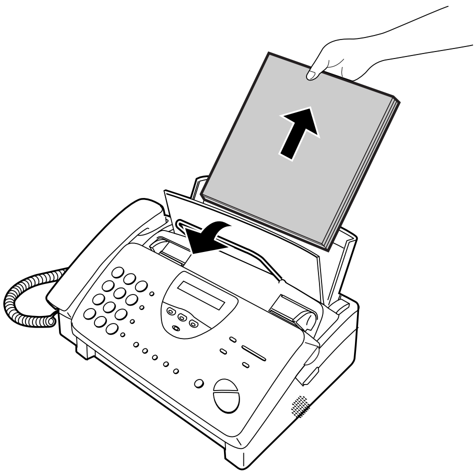


③ Close the operation panel, making sure it clicks into place.

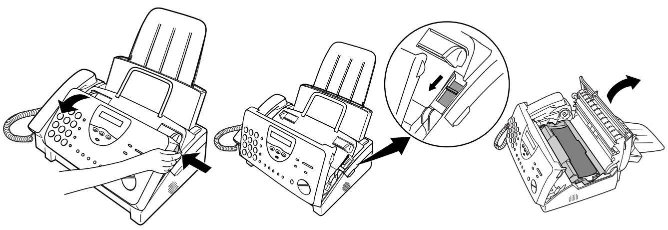


6. Clearing jammed printing paper

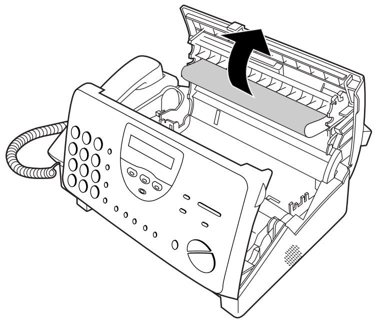
① Pull the paper release plate forward and remove the paper.



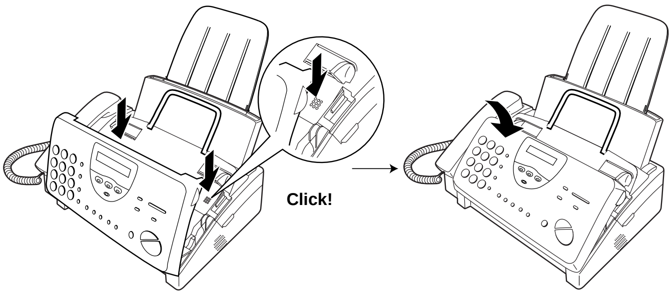
② Open the operation panel (grasp the finger hold and pull up), and then pull the release on the right side of the machine forward to open the print compartment cover.



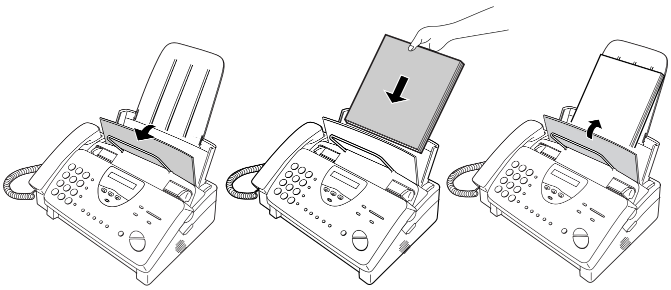
③ Gently pull the jammed paper out of the machine, making sure no torn pieces of paper remain in the print compartment or rollers.



④ Close the print compartment cover (press down on both sides to make sure it clicks into place), and then close the operation panel.



⑤ Pull the paper release plate toward you, reinsert the paper in the paper tray and push the paper release plate back down.



If SET PAPER & PRESS START KEY appears in the display, make sure the paper is inserted correctly and then press the **START/MEMORY** key.

[5] Quick reference guide (UX-465L)

ENTERING YOUR NAME AND NUMBER

1. Press: FUNCTION 3 # #

   Display shows: OWN NUMBER SET

2. Press: START/MEMORY
3. Enter your fax number (max. of 20 digits) by pressing the number keys.

- To insert a space between digits, press the # key.
- If you make a mistake, press the **SPEED DIAL** key to backspace and clear the mistake.

4. Press: START/MEMORY
5. Enter your name by pressing the appropriate number keys as shown below.

- To enter two letters in succession that require the same key, press the **SPEAKER** key after entering the first letter.

SPACE = 1 1	J = 5 5	T = 8 8
A = 2 2	K = 5 5 5	U = 8 8 8
B = 2 2 2	L = 5 5 5 5	V = 8 8 8 8
C = 2 2 2 2	M = 6 6	W = 9 9
D = 3 3	N = 6 6 6	X = 9 9 9
E = 3 3 3	O = 6 6 6 6	Y = 9 9 9 9
F = 3 3 3 3	P = 7 7	Z = 9 9 9 9 9
G = 4 4	Q = 7 7 7	move → = SPEAKER
H = 4 4 4	R = 7 7 7 7	
I = 4 4 4 4	S = 7 7 7 7 7	move ← = HOLD/SEARCH

- To change case, press the **REDIAL** key.
  Press # or ⁎ to scroll through symbols and special characters.

6. When finished, press: START/MEMORY STOP

SETTING THE DATE AND TIME

1. Press: FUNCTION 3 ⁎ ⁎ ⁎ ⁎

   Display shows: DATE & TIME SET

2. Press: START/MEMORY
3. Enter two digits for the month (01 to 12).
4. Enter two digits for the day (01 to 31).
5. Enter four digits for the year (Ex: 2001).
6. Enter two digits for the hour (01 to 12)
   and two digits for the minute (00 to 59).
7. Press ⁎ for A.M. or # for P.M.
8. When finished, press: START/MEMORY STOP

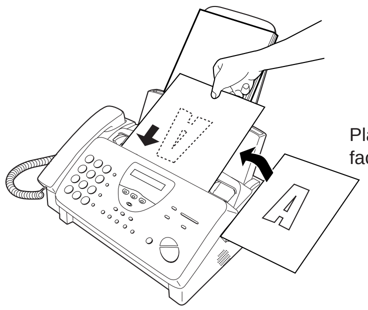
STORING AND CLEARING AUTO DIAL NUMBERS

1. Press: FUNCTION 3 #

   Display shows: FAX/TEL # MODE

2. Press **1** to store a number or **2** to clear a number.
3. Enter a 2-digit Speed Dial number (from 01 to 04 for Rapid Key Dialing, or 05 to 44 for Speed Dialing). (If you are clearing a number, go to Step 7.)
4. Enter the full fax/telephone number.
5. Press: START/MEMORY
6. Enter the name of the location by pressing number keys (Refer to the letter entry table in *ENTERING YOUR NAME AND NUMBER*.)
7. Press: START/MEMORY STOP

SENDING FAXES



Place your document (up to 10 pages) face down in the document feeder.

Normal Dialing

1. Lift the handset or press: SPEAKER
2. Dial the fax number.
3. Wait for the reception tone (if a person answers, ask them to press their Start key).
4. Press: START/MEMORY

Rapid Key Dialing

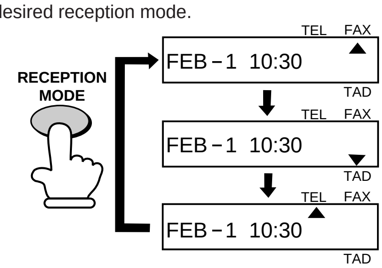
Press the appropriate Rapid Key. Transmission will begin automatically.

Speed Dialing

1. Press: SPEED DIAL
2. Enter 2-digit Speed Dial number.
3. Press: START/MEMORY

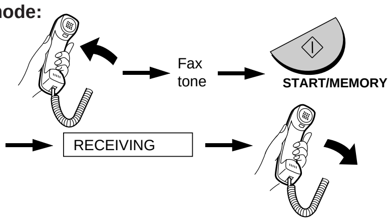
RECEIVING FAXES

Press the **RECEPTION MODE** key until the arrow in the display points to the desired reception mode.



FAX mode: The fax automatically answers on four rings and receives the incoming document.

TEL mode:



TAD mode: Select this mode when you go out to receive both voice messages and faxes.

RECORDING AN OUTGOING MESSAGE

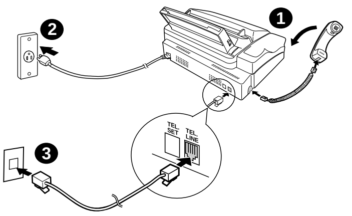
1. Press: FUNCTION 0 #

   Display shows: OGM RECORDING

2. Press: START/MEMORY
3. Press **1** (GENERAL) to record an outgoing message for the answering machine. Press **2** (TRANSFER) to record an outgoing message for the Transfer function.
4. Pick up the handset, press the **START/MEMORY** key, and speak into the handset to record your message.
5. When finished, press the **STOP** key or replace the handset.
6. Press: STOP STOP

[5] Quick reference guide (UX-465C/485LU)

INSTALLATION



1. Connect the handset as shown.
2. Plug the power cord into a grounded, 120 V outlet.
3. Plug one end of the telephone line into the **"TEL. LINE"** jack on the rear of the fax, and the other end into your telephone wall jack.

RECORDING AN OUTGOING MESSAGE

1. Press: FUNCTION 0 #

   Display shows: OGM RECORDING

2. Press: START/MEMORY
3. Press **1** (GENERAL) to record an outgoing message for the answering machine. Press **2** (TRANSFER) to record an outgoing message for the Transfer function.
4. Pick up the handset, press the **START/MEMORY** key, and speak into the handset to record your message.
5. When finished, replace the handset.
6. Press: STOP STOP

ENTERING YOUR NAME AND NUMBER

Note: Imaging film and paper must be loaded to perform the following operation.

1. Press: FUNCTION 3 # #

   Display shows: OWN NUMBER SET

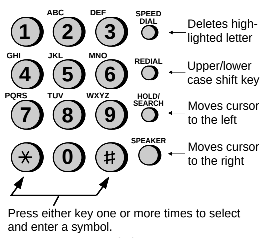
2. Press: START/MEMORY
3. Enter your fax number (max. of 20 digits) by pressing the number keys.

♦ If you make a mistake, press the **HOLD/SEARCH** key to move the cursor back to the mistake, then enter the correct number or letter.

4. Press: START/MEMORY
5. Enter your name by pressing the appropriate number keys as shown below.

♦ To enter two letters in succession that require the same key, press the **SPEAKER** key after entering the first letter.

SPACE = 1 1
A = 2 2
B = 2 2 2
C = 2 2 2 2
D = 3 3
E = 3 3 3
F = 3 3 3 3
G = 4 4
H = 4 4 4
I = 4 4 4 4
J = 5 5
K = 5 5 5
L = 5 5 5 5
M = 6 6
N = 6 6 6
O = 6 6 6 6
P = 7 7
Q = 7 7 7
R = 7 7 7 7
S = 7 7 7 7 7
T = 8 8
U = 8 8 8
V = 8 8 8 8
W = 9 9
X = 9 9 9
Y = 9 9 9 9
Z = 9 9 9 9 9
move → = SPEAKER
move ← = HOLD/SEARCH



6. When finished, press: START/MEMORY STOP

SETTING THE DATE AND TIME

Note: Imaging film and paper must be loaded to perform the following operation.

Press: FUNCTION (UX-465C) 3 * * * *
FUNCTION (UX-485LU) 3 * * *

Display shows: DATE & TIME SET

Press the **START/MEMORY** key: START/MEMORY

Enter two digits for the Month (01 through 12).

Enter two digits for the Day (01 through 31).

Enter four digits for the Year (Ex: 2001).

Enter two digits for the Hour (01 through 12).

Enter two digits for the Minute (00 through 59).

Press the * key for A.M. or the # key for P.M.

When finished, press: START/MEMORY STOP

STORING AND CLEARING NUMBERS FOR AUTO DIALING

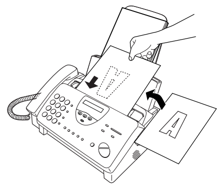
Note: Imaging film and paper must be loaded to perform the following operation.

1. Press: FUNCTION 3 #

   Display shows: FAX/TEL # MODE

2. Press **1** to store a number or **2** to clear a number.
3. Enter a 2-digit Speed Dial number (from 01 to 05 for Rapid Key Dialing, or 06 to 45 for Speed Dialing). (If you are clearing a number, go to Step 7.)
4. Enter the full telephone/fax number.
5. Press: START/MEMORY
6. Enter the name of the location by pressing number keys (max. of 20 characters). (Refer to the letter entry table in *ENTERING YOUR NAME AND NUMBER*.)
7. Press: START/MEMORY STOP

SENDING DOCUMENTS



Place your document (up to 10 pages) face down in the document feeder.

Normal Dialing

1. Lift the handset or press SPEAKER
2. Dial the fax number.
3. Wait for the reception tone (if a person answers, ask them to press their Start key).
4. Press: START/MEMORY

Rapid Key Dialing

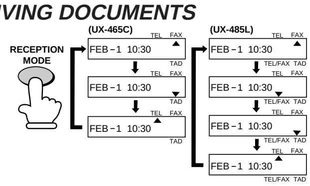
Press the appropriate Rapid Key. Transmission will begin automatically.

Speed Dialing

1. Press: SPEED DIAL
2. Enter 2-digit Speed Dial number.
3. Press: START/MEMORY

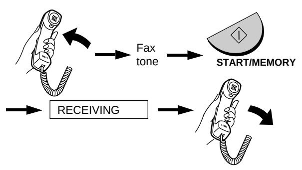
RECEIVING DOCUMENTS

Press:



FAX mode: The fax automatically answers on four rings and receives the incoming document.

TEL mode:



TEL/FAX mode (UX-485LU only):
The fax machine automatically answers on 4 rings and receives faxes. Voice calls (including manually dialed fax transmissions) are signaled by a special ringing sound.

TAD mode (UX-485LU): Select this mode when you go out to receive both voice messages and faxes.

TAD mode (UX-465C): Select this mode when an answering machine is connected to the fax and the answering machine is turned on.

CHAPTER 2. ADJUSTMENTS

[1] Adjustments

General

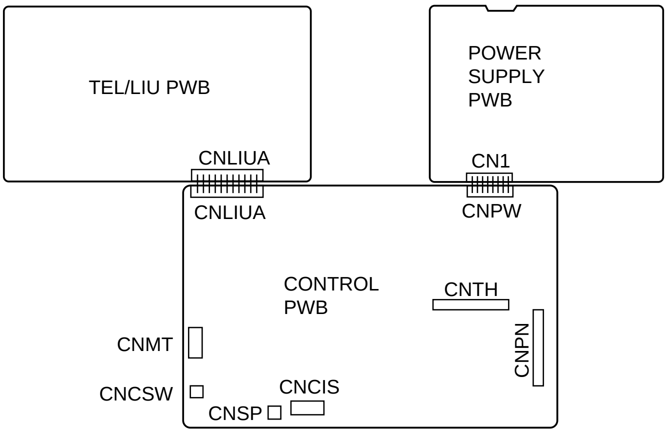
Since the following adjustments and settings are provided for this model, make adjustments and/or setup as necessary.

1. Adjustments

Adjustments of output voltage (FACTORY ONLY)

1. Install the power supply unit in the machine.
2. Set the recording paper and document.
3. When the document is loaded, power is supplied to the output lines. Confirm that outputs are within the limits below.

Output voltage settings



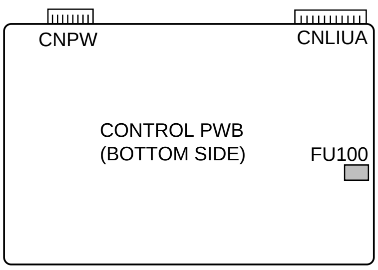
Output	Voltage limits
+5V	4.75V ~ 5.25V
+24V	23.3V ~ 24.7V

Connector No. / Pin No.	CNPW
1	MG
2	MG
3	+24V
4	+24V
5	+24V
6	DG
7	+5V
8	DG

2. IC protectors replacement

ICPs (IC Protectors) are installed to protect the motor driver circuit. ICPs protect various ICs and electronic circuits from an overcurrent condition.

The location of ICPs are shown below:



(1) FU100 (KAB2402) is installed in order to protect IC's from an overcurrent generated in the motor drive circuit. If FU100 is open, replace it with a new one.

3. Settings

(1) Dial mode selector

DIAL mode (Soft Switch No. SWB4 DATA No. 3)

(step 1) Select "OPTION SETTING".

KEY : FUNCTION ④

DISPLAY: OPTION SETTING ⇔ PRESS ✕ OR #

(step 2) Select "DIAL MODE".

KEY: Push # until " DIAL MODE " is indicated because the number of #s changes by the model.

Cursor
When initially registering, the mode shows 1=TONE. When registering again, the mode which was registered formerly is shown.

DISPLAY: DIAL MODE ⇔ 1=TONE, 2=PULSE

(step 3) Select, using "1" or "2".

KEY: ①

DISPLAY: TONE SELECTED

KEY: ②

DISPLAY: PULSE SELECTED

(step 4) End, using the "STOP" key.

KEY: STOP

4. Volume adjustment

You can adjust the volume of the speaker and ringer using the **UP** and **DOWN** keys.

(1) Speaker

① Press the **SPEAKER** key.

② Press the **UP** or **DOWN** key.

Display:

SPEAKER: [■■■■■]
SPEAKER: [■■■■]
SPEAKER: [■■■]
SPEAKER: [■■]
SPEAKER: [■]

③ When the display shows the desired volume level, press the **SPEAKER** key to turn off the speaker.

(2) Handset (UX-465L/C only)

① Lift the handset.

② Press the **UP** or **DOWN** key.

Display:

RECEIVER: HIGH
↕
RECEIVER: MIDDLE
↕
RECEIVER: LOW

③ When the display shows the desired volume level, replace the handset.

(3) Ringer

① Press the **UP** or **DOWN** key. (Make sure the **SPEAKER** key has not been pressed and the handset is not lifted.)

Display:

RINGER: HIGH
↕
RINGER: MIDDLE
↕
RINGER: LOW
↕
RINGER OFF: OK?

The ringer will ring once at the selected level, then the date and time will reappear in the display.

② If you selected RINGER OFF: OK?, press the **START/MEMORY** key.

[2] Diagnostics and service soft switch

1. Operating procedure

(1) Entering the diagnostic mode

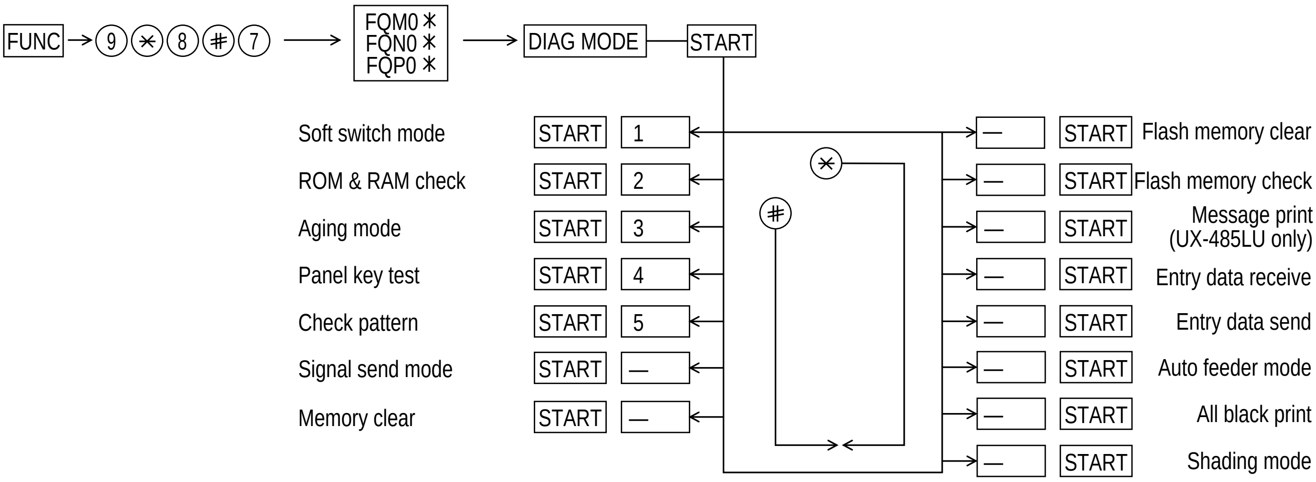
Press [FUNC] → [9] → [*] → [8] → [#] → [7] , and the following display will appear.

[ROM Ver. FQM0 * (FQN0 *, FQP0 *)] After 2 sec: [DIAG MODE]

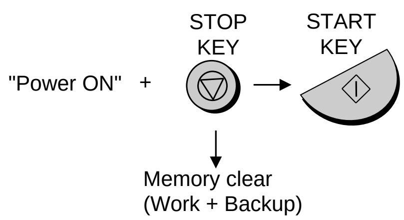
FQM0 * (UX-465L)
FQN0 * (UX-465C)
FQP0 * (UX-485LU)

Then press the [START] key. Select the desired item with the [*] key or the [#] key or select with the rapid key. Enter the mode with the START key.

(Diag•specifications)



If the diag mode cannot be set, repeat the diag mode operation, performing the following operation.
After the power is turned on and "WAIT A MOMENT" is indicated, press the STOP key.



In relation with the process response (request from Production Engineering) "WAIT A MOMENT" clock indication may appear depending on STOP key timing. If the STOP key is held down, "MEMORY CLEAR?" appears.

2. Diagnostic items

ITEM No.	DIRECT key	Contents	Function
1	1	SOFT SWITCH MODE	Soft switches are displayed and changed. List can be output.
2	2	ROM & RAM CHECK	ROM is sum-checked, and RAM is matched. Result list is output.
3	3	AGING MODE	10 sheets of check patterns are output every 5 minutes per sheet.
4	4	PANEL KEY TEST	Panel keys are tested. Result list is output.
5	5	CHECK PATTERN	Check pattern is output.
6	—	SIGNAL SEND MODE	Various signals of FAX communication are output.
7	—	MEMORY CLEAR	Back-up memory is cleared, and is set at delivery.
8	—	SHADING MODE	Shading compensation is performed in this mode.
9	—	ALL BLACK PRINT	To check the print head, whole dots are printed over the interval of 2 m.
10	—	AUTO FEEDER MODE	Insertion and discharge of document are tested.
11	—	ENTRY DATA SEND	Registered content is sent.
12	—	ENTRY DATA RECEIVE	Registered content is received, and its list is output.
13	—	MESSAGE PRINT	The display message of each language is printed out together with the English equivalent. (UX-485LU only)
14	—	FLASH MEMORY CHECK	Checks flash memory write/read.
15	—	FLASH MEMORY CLEAR	Checks flash memory clearing.

3. Diagnostic items description

3. 1. Soft switch mode

Used to change the soft switch settings.

The soft switch which is stored internally is set by using the keys.

The available soft switches are SW-A1 to SW-N3.

The content of soft switches is shown in page 2-5 to 2-19.

The contents are set to factory default settings.

3. 2. ROM & RAM check

ROM executes the sum check, and RAM executes the matching test. The result will be notified with the number of short sounds of the buzzer as well as by printing the ROM & RAM check list.

Number of short sounds of buzzer 0 → No error
1 → ROM error
2 → RAM error (32Kbyte)

3. 3. Aging mode

If any document is first present, copying will be executed sheet by sheet. If no document is present, the check pattern will be printed sheet by sheet. This operation will be executed at a rate of one sheet per 5minutes, and will be ended at a total of 10 sheets.

3. 4. Panel key test

This mode is used to check whether each key operates properly or not. Press the key on the operation panel, and the key will be displayed on the display. Therefore, press all keys. At this time, finally press the STOP key.

When the STOP key is pressed, the keys which are not judged as "pressed" will be printed on the result list.

- LED part of the contact image sensor (CIS) is kept on during the term from when "START" of the panel test mode to end with the STOP key.

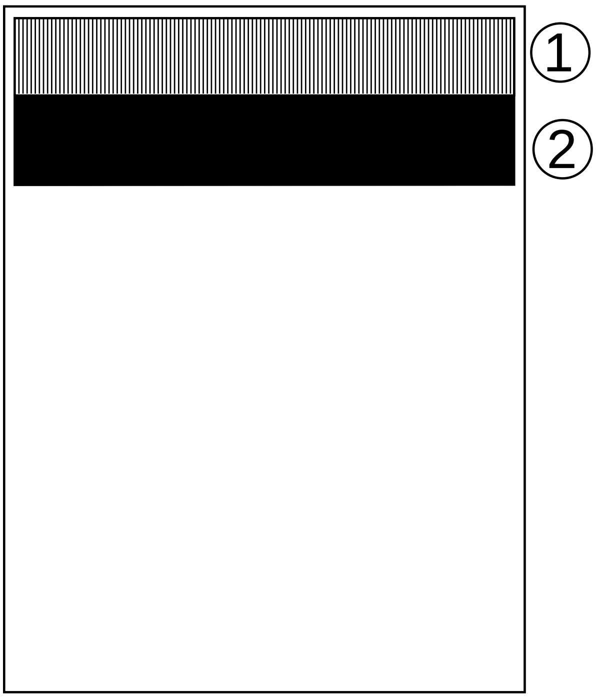
3. 5. Check pattern

This mode is used to check the state of the printing head. It is ended with the following pattern printed on one printing sheet.

① Longitudinal stripe 2 Approx. 30 mm

2 black dots and 2 white dots are repeatedly progressed on one line.

② Full black Approx. 30 mm



3. 6. Signal send mode

This mode is used to send various signals to the circuit during FAX communication. Every push of START key sends a signal in the following sequence. Moreover, the signal sound is also output to the speaker when the line monitor of the soft switch is on.

[1] No signals

[2] 14400BPS (V.33)

[3] 12000BPS (V.33)

[4] 14400BPS (V.17)

[5] 12000BPS (V.17)

[6] 9600BPS (V.17)

[7] 7200BPS (V.17)

[8] 9600BPS (V.29)

[9] 7200BPS (V.29)

[10] 4800BPS (V27ter)

[11] 2400BPS (V27ter)

[12] 300BPS (FLAG)

[13] 2100Hz (CED)

[14] 1100Hz (CNG)

[15] PSEUDO RINGER (UX-485LU only)

3. 7. Memory clear

This mode is used to clear the backup memory and reset to the default settings.

3. 8. Shading mode

The mode is used for the shooting compensation. For reading, set up the special original paper.
The shooting compensation memorizes the reference data of white and black for reading.
Moreover, the memorized data is not erased even if memory clear mode is executed.

3. 9. All black print

This mode is used to check the state of the printing head and intentionally overheat it. Whole dots are printed over the interval of 2 m. If it is overheated or the printing sheet is jammed, press STOP key for the end.

3. 10. Auto feeder mode

In this mode, a document is inserted and discharged to check the auto feed function.

After this mode is started, set a document, and the document feed will be automatically tested.

3. 11. Entry data send

This mode is used to send the registered data to the other machine and make the other machine copy the registered content.

Before sending in this mode, it is necessary to set the other machine at the entry data receive mode.

The following, information will be sent to the remote machine:

1. Telephone list data
2. Sender register data
3. Optional setting content
4. Soft switch content
5. Junk fax number list
6. Timer reservation data (only on the model which timer reservation is possible)
7. Recording setting list data

3. 12. Entry data receive

In this mode, the registered data sent from the other machine is received and the received data is registered in the machine. When this mode is used for receiving, the other machine must be in the entry data send mode.

After receiving is completed, the following lists are printed.

1. Telephone list data
2. Sender register data (The passcode No. is also printed if the polling function is provided.)
3. Optional setting list
4. Soft switch content
5. Junk fax number list
6. Timer reservation list (only model which timer communication is possible)
7. Recording setting list data

4. How to make soft switch setting

To enter the soft switch mode, press the following key entries in sequence.

3. 13. Message print (UX-485LU only)

In this mode, all the message data, which are used for displaying indication and list print, are printed as a contrast table of the selected language and English.

3. 14. Flash memory check

Data is written into and read from the flash memory to check the data conformity. When the unit enters this mode, the check is started.

3. 15. Flash memory clear

Data in the flash memory is cleared (memory clear). When the unit enters this mode, the check is started.
*Operation of hardware and signal in the flash memory check mode and flash memory clear mode, and the result of check.
The result is announced by the buzzer beeps. The result of check is printed.
Beeps
0 → No error
1 → Memory error

Press [FUNCTION] [9] [*] [8] [#] [7] [START] [START]

⇩

DATA No. 1 2 3 4 5 6 7 8

S F T SW-A1 = 0 0 0 0 0 0 0 0
→ Press [FUNCTION] key.
S F T SW-A1 = 1 0 0 0 0 0 0 0
→ Press [#] key.
S F T SW-A1 = 1 0 0 0 0 0 0 0
→ Press [*] key.
S F T SW-A1 = 1 0 0 0 0 0 0 0
→ Bit1 - 8 are set.
S F T SW-A1 = 1 0 0 0 0 0 0 0
→ Press [START] key during setting.
S F T SW-A2 = 0 0 0 0 0 0 0 0
→ Soft SW-A2 - SW-N3 are set.
S F T SW-N3 = 0 0 0 0 0 0 0 0

- To finish the settings halfway between SW-A1 and SW-N3, press the STOP key. In this case, the setting being done to the SW No. on display will be nullified while settings done to the preceding SW No. remain in effect.
- When the COPY key is pressed, the contents of soft switches are printed.

The soft switch mode is terminated.

5. Soft switch description

• Soft switch

SW NO.	DATA NO.	ITEM	Switch setting and function: 1	Switch setting and function: 0	Initial setting	Remarks
SW I A1	1	Protect from echo	No	Yes	0	
	2	Forced 4800 BPS reception	Yes	No	0	
	3	Footer print	Yes	No	0	
	4	Length limitation of copy/send/receive	No limit	Copy/send: 60cm Receive: 1m	0	
	5	CSI transmission	No transmitted	Transmitted	0	
	6	DIS receive acknowledgement during G3 transmission	Twice	NSF: Once DIS: Twice	0	
	7	Non-modulated carrier for V29 transmission mode	Yes	No	0	
	8	EOL detect timer	25 s	13 s	0	

SW I A2 — Modem speed (DATA NO. 1–4)

DATA NO.	V.33 14400	V.33 12000	V.17 14400	V.17 12000	V.17 9600	V.17 7200	V.29 9600	V.29 7200	V.27 ter 4800	V.27 ter 2400	Initial setting
1	0	0	1	1	1	1	0	0	0	0	1
2	1	1	0	0	0	0	0	0	0	0	0
3	0	1	0	1	0	1	0	1	1	0	0
4	0	0	0	0	1	1	1	1	0	0	0

SW NO.	DATA NO.	ITEM	1	0	Initial setting	Remarks
SW I A2	5	Sender's information transmit	No	Yes	0	
	6	Reserved			0	
	7	Communication error treatment in RTN sending mode (reception)	No communication error	Communication error	0	
	8	CNG transmission	No	Yes	0	

SW I A3 — CED tone signal interval (DATA NO. 1–2)

DATA NO.		1000ms	750ms	500ms	75ms	Initial setting
1	No. 1	1	1	0	0	0
2	No. 2	1	0	1	0	0

SW NO.	DATA NO.	ITEM	1	0	Initial setting	Remarks
SW I A3	3	MR coding	No	Yes	0	
	4	ECM mode	No	Yes	0	OPTION
	5	ECM MMR mode	No	Yes	0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW I A4 — Signal transmission level (DATA NO. 1–5)

Binary input

No. =	16	8	4	2	1
	1	2	3	4	5
	0	1	0	1	0

DATA NO.	Initial setting
1	0
2	1
3	0
4	1
5	0

SW NO.	DATA NO.	ITEM	1	0	Initial setting	Remarks
SW I A4	6	Protocol monitor (error print)	Printed at com. error	Not printed	0	
	7	Protocol monitor	Yes	No	0	
	8	Line monitor	Yes	No	0	

SW I A5 — Digital line equalization setting (Reception) (DATA NO. 1–2)

DATA NO.		7.2km	3.6km	1.8km	0km	Initial setting
1	No. 1	1	1	0	0	0
2	No. 2	1	0	1	0	1

Digital line equalization setting (Transmission) (DATA NO. 3–4)

DATA NO.		7.2km	3.6km	1.8km	0km	Initial setting
3	No. 3	1	1	0	0	0
4	No. 4	1	0	1	0	1

Digital cable equalizer setting (Reception for Caller ID) (DATA NO. 5–6)

DATA NO.		7.2km	0km	Initial setting
5	No. 5	1	0	0
6	No. 6	1	0	0

SW NO.	DATA NO.	ITEM	1	0	Initial setting	Remarks
SW I A5	7	Error criterion	10 ~ 20 %	5 ~ 10 %	0	
	8	Anti junk fax check	Yes	No	0	OPTION

SW NO.	DATA NO.	ITEM	Switch setting and function: 1	Switch setting and function: 0	Initial setting	Remarks
SW-A6	1	Auto gain control (MODEM)	Enable	Disable	1	
	2	End Buzzer	Yes	No	1	
	3	Disconnect the line when DIS is received in RX mode	No	Yes	1	
	4	Equalizer freeze control (MODEM)	On	Off	0	
	5	Equalizer freeze control 7200 BPS only	No	Yes	0	
	6	CNG transmission in manual TX mode	Yes	No	1	
	7	Reserved			0	
	8	Modem speed automatic fallback when RX level is under -40dBm	Yes	No	0	
SW-B1	1	Recall interval	Binary input		0	OPTION
	2		No. = 8 4 2 1		1	
	3		1 2 3 4		0	
	4		0 1 0 1		1	
	5	Recall times	Binary input		0	OPTION
	6		No. = 8 4 2 1		0	
	7		5 6 7 8		1	
	8		0 0 1 0		0	
SW-B2	1	Dial pausing (sec/pause)	4 sec	2 sec	0	
	2	Dial tone detection (before auto dial)	No	Yes	1	
	3	Reserved			0	
	4	Busy tone detection (after auto dial)	No	Yes	L/C: 0 LU: 1	
		Waiting time after dialing	45 seconds / 55 seconds / 90 seconds / 140 seconds			
	5		No.5: 0 / 0 / 1 / 1		0	
	6		No.6: 0 / 1 / 0 / 1		0	
	7	Reserved			0	
	8	Reserved			0	
SW-B3	1	Reserved			0	
	2	Reserved			0	
	3	Reserved			0	
	4	Reserved			0	
	5	Reserved			0	
		Auto dial mode delay timer of before line connect	0 second / 1.5 seconds / 3.0 seconds / 4.5 seconds			
	6		No.6: 0 / 0 / 1 / 1		0	
	7		No.7: 0 / 1 / 0 / 1		0	
	8	Hold key	Enable	Disable	1	
SW-B4		Auto dial mode delay timer of after line connect	1.7 seconds / 3.0 seconds / 3.6 seconds / 4.0 seconds			
	1		No.1: 0 / 0 / 1 / 1		0	
	2		No.2: 0 / 1 / 0 / 1		0	
	3	Dial mode	Tone	Pulse	1	OPTION
	4	Pulse → Tone change function by ⋇ key	Enable	Disable	1	
	5	Dial pulse make/break ratio (%)	40/60	33/67	1	
	6	Reserved			0	
	7	Reserved			0	
	8	Recalling fixed only one time when dialing was unsuccessful without detecting busy tone signal	Yes	No	L/C: 1 LU: 0	
SW-B5	1	DTMF signal transmission level (Low)	Binary input		0	
	2		No. = 16 8 4 2 1		1	
	3		1 2 3 4 5		0	
	4		0 1 0 1 1		1	
	5				1	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function: 1	Switch setting and function: 0	Initial setting	Remarks
SW-I-B6	1	DTMF signal transmission level (High)	Binary input No. = 16 8 4 2 1 1 2 3 4 5 0 0 1 1 1		0	
	2				0	
	3				1	
	4				1	
	5				1	
	6	Dial tone detection (LCR center call) (UX-465L only)	No	Yes	0	
	7	Reserved			0	
	8	Reserved			0	
SW-I-C1	1	Reading slice (Binary)	(Factory setting / Light / Dark / Darker in dark) No. 1: 0 / 1 / 0 / 1		0	
	2		No. 2: 0 / 0 / 1 / 1		0	
	3	Reading slice (Half tone)	(Factory setting / Light / Dark / Darker in dark) No. 3: 0 / 1 / 0 / 1		0	
	4		No. 4: 0 / 0 / 1 / 1		0	
	5	Line density selection	Fine	Standard	0	OPTION
	6	Reserved			0	
	7	MTF correction in half tone mode	No	Yes	0	
	8	Reserved			0	
SW-I-D1	1	Number of rings for auto receive	Binary input No. = 8 4 2 1 1 2 3 4 0 1 0 0		0	OPTION
	2				1	
	3				0	
	4				0	
	5	Automatic switching manual to auto receive mode	Reception after 5 rings	No reception	0	OPTION (LU only)
	6	Reserved			0	
	7	CI detect frequency	(As PTT / 11.5Hz / 13.0Hz / 20.0Hz) No.7: 0 / 0 / 1 / 1		0	
	8		No.8: 0 / 1 / 0 / 1		0	
SW-I-D2	1	Distinctive ringing setting (PATTERN 4 and 5 are for CANADA only) (UX-465L/C only)	(No. 1 / No. 2 / No. 3) OFF: 0 / 0 / 0 STANDARD: 0 / 0 / 1 PATTERN1: 0 / 1 / 0 PATTERN2: 0 / 1 / 1 PATTERN3: 1 / 0 / 0 PATTERN4: 1 / 0 / 1 PATTERN5: 1 / 1 / 0		0	OPTION
	2				0	
	3				0	
	4	Reserved			0	
	5	Caller ID function	Yes	No	0	OPTION
	6	Caller ID detect during CI off	All times	Only first	0	
	7	Reserved			0	
	8	Reserved			0	
SW-I-D3	1	CI off detection timer (0-1550ms setting by 50ms step)	Binary input No. = 16 8 4 2 1 1 2 3 4 5 0 1 1 1 0		0	
	2				1	
	3				1	
	4				1	
	5				0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

SW NO.	DATA NO.	ITEM	Switch setting and function					Initial setting	Remarks
			1		0				
SW I E1	1	Tel/Fax Automatic switching mode (UX-485LU only)	Tel/Fax auto switch		Switch to Fax			1	
		Pseudo ringing time at phone/fax automatic switching mode (UX-485LU only)		15sec	60sec	30sec	120sec		OPTION
	2		No. 2	0	0	1	1	0	
	3		No. 3	0	1	0	1	0	
	4	Number of CNG signal detection at the tel/fax automatic switching mode (UX-485LU only)	Twice		Once			1	
	5	CNG detection when TEL/FAX mode (UX-485LU only)	3sec		5sec			0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	
SW I E2	1	Pseudo ringer sound volume (UX-485LU only)	Binary input					1	
	2		No. =	8	4	2	1	0	
	3			1	2	3	4	1	
	4			1	0	1	0	0	
	5	Reserved						0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	
SW I E3	1	Reserved						0	
	2	Reserved						0	
	3	Reserved						0	
	4	Reserved						0	
	5	Reserved						0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	
SW I F1		DTMF detection time		50ms	80ms	100ms	120ms		
	1		No. 1	0	0	1	1	0	
	2		No. 2	0	1	0	1	0	
	3	Protection of remote reception (5 ⁎⁎) detect	Yes		No			0	OPTION
	4	Remote reception with GE telephone	Compatible		Not compatible			1	
	5	Remote operation code figure by external TEL (0~9)	Binary input					0	OPTION
	6		No. =	8	4	2	1	1	
	7			5	6	7	8	0	
	8			0	1	0	1	1	
SW I F2	1	CNG detection in STAND-BY mode	Yes		No			1	OPTION
		Number of CNG detect (AM mode)		1pulse	2pulses	3pulses	4pulses		
	2		No. 2	0	0	1	1	0	
	3		No. 3	0	1	0	1	1	
		Number of CNG detect (STAND-BY mode)		1pulse	2pulses	3pulses	4pulses		
	4		No. 4	0	0	1	1	0	
	5		No. 5	0	1	0	1	1	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	
SW I G1	1	Reserved						0	
	2	Reserved						0	
	3	Reserved						0	
	4	Reserved						0	
	5	Reserved						0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	

SW NO.	DATA NO.	ITEM	Switch setting and function: 1		0			Initial setting	Remarks
SW I G2	1	Reserved						0	
	2	Reserved						0	
	3	Reserved						0	
	4	Reserved						0	
	5	Reserved						0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	
SW I G3	1	Reserved						0	
	2	Reserved						0	
	3	Reserved						0	
	4	Reserved						0	
	5	Reserved						0	
	6	Reserved						0	
	7	Reserved						0	
	8	Reserved						0	
SW I H1		Busy tone detection ON/OFF time (Lower duration)		150ms	200ms	250ms	350ms		
	1		No. 1	0	0	1	1	0	
	2		No. 2	0	1	0	1	1	
		Busy tone detection ON/OFF time (Upper duration)		650ms	900ms	1500ms	2700ms		
	3		No. 3	0	0	1	1	0	
	4		No. 4	0	1	0	1	1	
	5	Busy tone detect continuation sound detect during OGM	No		Yes			0	
	6	Busy tone detect continuation sound detect (during ICM: for internal A.M.)	No		Yes			0	
	7	Busy tone detect intermittent sound detect during OGM	No		Yes			0	
	8	Busy tone detect intermittent sound detect (during ICM: for internal A.M.)	No		Yes			0	
SW I H2		Busy tone detection pulse number		2pulses	4pulses	6pulses	10pulses		
	1		No. 1	0	0	1	1	0	
	2		No. 2	0	1	0	1	1	
	3	Fax switching when A.M. full	Yes		No			0	OPTION
	4	Busy tone detect continuation sound detect frequency	320Hz - 570Hz		320Hz - 460Hz			0	
	5	Reserved						0	
	6	Reserved						0	
	7	AM OGM announce only mode	Yes		No			0	OPTION
	8	Busy tone continuous sound detect time	5s		10s			1	
SW I I1		ICM recording time		4min	15s	30s	60s		OPTION
	1		No. 1	0	0	1	1	0	
	2		No. 2	0	1	0	1	0	
		A.M. quiet time 1		2s	3s	4s	5s		
	3		No. 3	0	0	1	1	0	
	4		No. 4	0	1	0	1	0	
		A.M. quiet time 2		0s	1s	2s	3s		
	5		No. 5	0	0	1	1	1	
	6		No. 6	0	1	0	1	0	
	7	Key input buzzer on/off switch (Two way recording mode)	On		Off			0	
	8	CPC signal detection (UX-465L/C only)	Yes		No			1	OPTION

SW NO.	DATA NO.	ITEM	Switch setting and function: 1	Switch setting and function: 0	Initial setting	Remarks
SW I2	1	A.M. quiet detect time	Binary input		0	
	2		No. = 16 8 4 2 1		0	
	3		1 2 3 4 5		1	
	4		0 0 1 1 0		1	
	5				0	
		CPC detection time (UX-465L/C only)	4ms / 20ms / 40ms / 70ms / 140ms / 160ms / 200ms / 290ms			
	6		No. 6: 0 / 0 / 0 / 0 / 1 / 1 / 1 / 1		1	
	7		No. 7: 0 / 0 / 1 / 1 / 0 / 0 / 1 / 1		1	
	8		No. 8: 0 / 1 / 0 / 1 / 0 / 1 / 0 / 1		1	
SW I3	1	Reserved			0	
	2	Max OGM record time	15s	60s	0	
	3	Two way record function	Disable	Enable	0	
	4	Toll saver	Disable	Enable	0	OPTION
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Transfer dial recall	No	Yes	0	
SW I4	1	AGC maximum gain (line)	Binary input		0	
	2	(10 ~ 25 dB) (1 dB step)	No. = 8 4 2 1		1	
	3		1 2 3 4		0	
	4		0 1 0 1		1	
	5	AGC maximum gain (Mic)	Binary input		0	
	6	(10 ~ 25 dB) (1 dB step)	No. = 8 4 2 1		1	
	7		5 6 7 8		1	
	8		0 1 1 0		0	
SW I5	1	AGC eref access code (line)	Binary input		1	
	2	(-0 ~ -30 dB) (2 dB step)	No. = 8 4 2 1		0	
	3		1 2 3 4		1	
	4		1 0 1 1		1	
	5	AGC eref access code (Mic)	Binary input		1	
	6	(-0 ~ -30 dB) (2 dB step)	No. = 8 4 2 1		1	
	7		5 6 7 8		0	
	8		1 1 0 1		1	
SW I6	1	AGC again adaptation threshold (line)	Binary input		1	
	2		No. = 8 4 2 1		1	
	3		1 2 3 4		1	
	4		1 1 1 1		1	
	5	AGC again adaptation threshold (Mic)	Binary input		1	
	6		No. = 8 4 2 1		1	
	7		5 6 7 8		1	
	8		1 1 1 1		1	
SW I7		AGC slew rate (line)	Slow / Normal / Little fast / Fast			
	1		No. 1: 0 / 0 / 1 / 1		0	
	2		No. 2: 0 / 1 / 0 / 1		1	
		AGC slew rate (Mic)	Slow / Normal / Little fast / Fast			
	3		No. 3: 0 / 0 / 1 / 1		1	
	4		No. 4: 0 / 1 / 0 / 1		1	
	5	Reserved			0	
	6	Reserved			0	
	7	Reserved			0	
	8	Reserved			0	

<table>
<tr><th rowspan="2">SW NO.</th><th rowspan="2">DATA NO.</th><th rowspan="2">ITEM</th><th colspan="6">Switch setting and function</th><th rowspan="2">Initial setting</th><th rowspan="2">Remarks</th></tr>
<tr><th colspan="3">1</th><th colspan="3">0</th></tr>
<tr><td rowspan="9">SW
I
J1</td><td>1</td><td>Activity report print</td><td colspan="3">Automatic printout</td><td colspan="3">No printout when memory full</td><td>0</td><td>OPTION</td></tr>
<tr><td>2</td><td>Total communication hours and pages print</td><td colspan="3">No</td><td colspan="3">Yes</td><td>0</td><td></td></tr>
<tr><td>3</td><td>Sender’s phone number setting</td><td colspan="3">Cannot change</td><td colspan="3">Change allowed</td><td>0</td><td></td></tr>
<tr><td>4</td><td>Reserved</td><td colspan="3"></td><td colspan="3"></td><td>0</td><td></td></tr>
<tr><td>5</td><td>Reserved</td><td colspan="3"></td><td colspan="3"></td><td>0</td><td></td></tr>
<tr><td>6</td><td>Summer time setting (UX-465L/C only)</td><td colspan="3">No</td><td colspan="3">Yes</td><td>1</td><td>OPTION</td></tr>
<tr><td></td><td rowspan="3">Ringer volume</td><td></td><td>Off</td><td>Low</td><td>Middle</td><td colspan="2">High</td><td></td><td rowspan="3">OPTION</td></tr>
<tr><td>7</td><td>No. 7</td><td>0</td><td>0</td><td>1</td><td colspan="2">1</td><td>1</td></tr>
<tr><td>8</td><td>No. 8</td><td>0</td><td>1</td><td>0</td><td colspan="2">1</td><td>0</td></tr>
<tr><td rowspan="10">SW
I
J2</td><td>1</td><td>Reserved</td><td colspan="3"></td><td colspan="3"></td><td>0</td><td></td></tr>
<tr><td>2</td><td>Reserved</td><td colspan="3"></td><td colspan="3"></td><td>0</td><td></td></tr>
<tr><td>3</td><td>Polling key</td><td colspan="3">Yes</td><td colspan="3">No</td><td>0</td><td>OPTION</td></tr>
<tr><td></td><td rowspan="3">Handset receiver volume (UX-465L/C only)</td><td></td><td>Low</td><td>Low</td><td>Middle</td><td colspan="2">High</td><td></td><td rowspan="3">OPTION</td></tr>
<tr><td>4</td><td>No. 4</td><td>0</td><td>0</td><td>1</td><td colspan="2">1</td><td>1</td></tr>
<tr><td>5</td><td>No. 5</td><td>0</td><td>1</td><td>0</td><td colspan="2">1</td><td>0</td></tr>
<tr><td></td><td rowspan="4">Speaker volume (5 stages)</td><td></td><td>Very Low</td><td>Low</td><td>Middle</td><td>High</td><td>Very High</td><td></td><td rowspan="4">OPTION</td></tr>
<tr><td>6</td><td>No. 6</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td></tr>
<tr><td>7</td><td>No. 7</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>1</td></tr>
<tr><td>8</td><td>No. 8</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>0</td></tr>
<tr><td rowspan="9">SW
I
J3</td><td>1</td><td>Automatic cover sheet</td><td colspan="3">Yes</td><td colspan="3">No</td><td>0</td><td>OPTION</td></tr>
<tr><td></td><td rowspan="4">Communication results printout
(Transaction report)</td><td></td><td>E/T/M</td><td>Send only</td><td>Always</td><td>No print</td><td>Err only</td><td></td><td rowspan="4">OPTION</td></tr>
<tr><td>2</td><td>No. 2</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td></tr>
<tr><td>3</td><td>No. 3</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td></tr>
<tr><td>4</td><td>No. 4</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>0</td></tr>
<tr><td>5</td><td rowspan="4">OGM/ICM output level to speaker
(0 dB ~ -15 dB) (1 dB step)</td><td colspan="6" rowspan="4">Binary input
No. = 8 4 2 1
5 6 7 8
0 0 1 1</td><td>0</td><td rowspan="4"></td></tr>
<tr><td>6</td><td>0</td></tr>
<tr><td>7</td><td>1</td></tr>
<tr><td>8</td><td>1</td></tr>
<tr><td rowspan="8">SW
I
K1</td><td>1</td><td>Entering DIAG mode by pressing SPEED key</td><td colspan="3">Yes</td><td colspan="3">No</td><td>0</td><td></td></tr>
<tr><td>2</td><td>Reserved</td><td colspan="3"></td><td colspan="3"></td><td>0</td><td></td></tr>
<tr><td>3</td><td rowspan="6">OGM/ICM output level
(0 dB ~ -32 dB) (1 dB step)</td><td colspan="6" rowspan="6">Binary input
No. = 32 16 8 4 2 1
3 4 5 6 7 8
0 0 1 1 0 0</td><td>0</td><td rowspan="6"></td></tr>
<tr><td>4</td><td>0</td></tr>
<tr><td>5</td><td>1</td></tr>
<tr><td>6</td><td>1</td></tr>
<tr><td>7</td><td>0</td></tr>
<tr><td>8</td><td>0</td></tr>
<tr><td rowspan="8">SW
I
L1</td><td>1</td><td>Reserved</td><td colspan="3"></td><td colspan="3"></td><td>0</td><td></td></tr>
<tr><td>2</td><td>Reserved</td><td colspan="3"></td><td colspan="3"></td><td>0</td><td></td></tr>
<tr><td>3</td><td>Reserved</td><td colspan="3"></td><td colspan="3"></td><td>0</td><td></td></tr>
<tr><td>4</td><td>Reserved</td><td colspan="3"></td><td colspan="3"></td><td>0</td><td></td></tr>
<tr><td>5</td><td>Cut off mode (COPY mode)</td><td colspan="3">Yes</td><td colspan="3">No</td><td>1</td><td>OPTION</td></tr>
<tr><td>6</td><td>A4 paper enable</td><td colspan="3">Enable</td><td colspan="3">Disable</td><td>L/C: 0
LU: 1</td><td></td></tr>
<tr><td>7</td><td>LEGAL & LETTER paper enable</td><td colspan="3">Enable</td><td colspan="3">Disable</td><td>1</td><td></td></tr>
<tr><td>8</td><td>2 IN 1 Mode</td><td colspan="3">Yes</td><td colspan="3">No</td><td>0</td><td>OPTION</td></tr>
</table>

SW NO.	DATA NO.	ITEM	Switch setting and function: 1		Switch setting and function: 0		Initial setting		Remarks
SW I L2		Paper set size		LETTER	LEGAL	A4	L/C	LU	OPTION
	1		No. 1	0	0	1	0	1	
	2		No. 2	0	1	0	0	0	
	3	Automatic reduce of receive	Auto		100 %		1		OPTION
	4	Print contrast	Light		Normal		0		OPTION
	5	Reception reduction ratio in case of memory full	100 %		93 %		0		OPTION
	6	Reserved					0		
	7	Reserved					0		
	8	Reserved					0		
SW I M1	1	Reserved					0		
	2	Reserved					0		
	3	Reserved					0		
	4	Reserved					0		
	5	Reserved					0		
	6	Reserved					0		
	7	Reserved					0		
	8	Reserved					0		
SW I M2	1	Reserved					0		
	2	Reserved					0		
	3	Reserved					0		
	4	Reserved					0		
	5	Reserved					0		
	6	Reserved					0		
	7	Reserved					0		
	8	Reserved					0		
SW I N1	1	LCR short time (UX-465L only)	Binary input				0		OPTION
	2		No. = 32 16 8 4 2 1				0		
	3		1 2 3 4 5 6				0		
	4		0 0 0 0 1 0				0		
	5						1		
	6						0		
	7	Reserved					0		
	8	Reserved					0		
SW I N2	1	LCR long time (UX-465L only)	Binary input				0		OPTION
	2		No. = 32 16 8 4 2 1				0		
	3		1 2 3 4 5 6				0		
	4		0 0 0 1 0 0				1		
	5						0		
	6						0		
	7	Reserved					0		
	8	Reserved					0		
SW I N3	1	LCR Time Select (UX-465L only)	Long		Short		0		OPTION
	2	Temporary release of caller ID withhold (UX-465L only)	Yes		No		1		
	3	Connect Japanese center (UX-465L only)	Connect Japanese center		Connect USA center		0		
	4	Open LCR debug mode (UX-465L only)	Open LCR debug mode ON		Open LCR debug mode OFF		0		
	5	Reserved					0		
	6	Reserved					0		
	7	Reserved					0		
	8	Reserved					0		

• Soft switch function description

SW-A1 No. 1 Protect from echo

Used to protect from echo in reception.

SW-A1 No. 2 Forced 4800BPS reception

When line conditions warrant that receptions take place at 4800 BPS repeatedly.

It may improve the success of receptions by setting at 4800BPS.

This improves the receiving document quality and reduces handshake time due to fallback during training.

SW-A1 No. 3 Footer print

When set to "1", the date of reception, the sender machine No., and the page No. are automatically recorded at the end of reception.

SW-A1 No. 4 Length limitation of copy/send/receive

Used to set the maximum page length.

To avoid possible paper jam, the page length is normally limited to 0.6 meter for copy or transmit, and 1 meters for receive.

It is possible to set it to "No limit" to transmit a long document, such as a computer print form, etc. (In this case, the receiver must also be set to no limit.)

SW-A1 No. 5 CSI transmission

(CSI TRANSMISSION) is a switch to set whether the machine sends or does not send the signal (CSI signal) informing its own telephone No. to the remote fax machine when information is received. When "nonsending" is set, the telephone No. is not output on the remote transmitting machine if the remote transmitting machine has the function to display or print the telephone No. of receiving machine, using this CSI signal.

SW-A1 No. 6 DIS receive acknowledgment during G3 transmission

Used to make a choice of whether reception of DIS (NSF) is acknowledged after receiving two DISs (NSFs) or receiving one DIS (two NSFs). It may be useful for overseas communication to avoid an echo suppression problem, if set to 1.

SW-A1 No. 7 Non-modulated carrier for V29 transmission mode

Though transmission of a non-modulated carrier is not required for transmission by the V29 modem according to the CCITT recommendation, it may be permitted to a send non-modulated carrier before the image signal to avoid an echo suppression problem. It may be useful for overseas communication to avoid an echo suppression problem, if set to 1.

SW-A1 No. 8 EOL (End Of Line) detect timer

Used to make a choice of whether to use the 25-second or 13-second timer for detection of EOL.
This is effective to override communication failures with some facsimile models that have longer EOL detection.

SW-A2 No. 1 ~ No. 4 Modem speed

Used to set the initial modem speed. The default is 9600BPS.
It may be necessary to program it to a slower speed when frequent line fallback is encountered, in order to save the time required for fallback procedure.

SW-A2 No. 5 Sender's information transmit

(SENDER'S INFORMATION TRANSMISSION) is a switch to set the function to print the content of HEADER PRINT described in the passcode list at the front end of receiver's original when original is sent to the remote machine.

If this switch is set to "NO", the HEADER PRINT is not output at the receiving machine.

SW-A2 No. 6 Reserved

Set to "0".

SW-A2 No. 7 Communication error treatment in RTN sending mode (Reception)

Used to determine communication error treatment when RTN is sent by occurrence of a received image error in G3 reception. When it is set to "1", communication error is judged as no error.

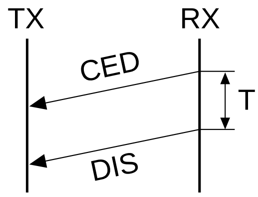
SW-A2 No. 8 CNG transmission

When set to "0" , this model allows CNG transmission by pressing the Start key in the key pad dialing mode. When set to "1", CNG transmission in the key pad dialing mode cannot be performed. In either case. CNG transmission can be performed in the auto dial mode.

SW-A3 No. 1, No. 2 CED tone signal interval

For international communication, the 2100Hz CED tone may act as an echo suppression switch, causing a communication problem.

Though SW-A3 No. 1 and No. 2 are normally set to 0, this selfing is used to change the time between the CED tone signal to eliminate the communication caused by echo.



SW-A3 No. 3 MR Coding

MR Coding is enable.

SW-A3 No. 4 ECM mode

Used to determine ECM mode function. Refer to following table.

SW-A3 No.4 ECM MODE		0	0	1	1
SW-A3 No.5 ECM MMR MODE		0	1	0	1
Compression method	ECM MMR mode	Yes	No	No	No
	ECM MH mode	Yes	Yes	No	No
	MR Mode	Yes	Yes	Yes	Yes

(Depending on remote machine)

SW-A3 No. 5 ECM MMR mode

See SW-A3 No. 4.

SW-A3 No. 6 ~ No. 8 Reserved

Set to "0".

SW-A4 No. 1 ~ No. 5 Signal transmission level

Used to control the signal transmission level in the range of-0dB to-31dB.

SW-A4 No. 6 Protocol monitor (Error print)

If set to "1", protocol is printed at communication error.

SW-A4 No. 7 Protocol monitor

Normally set to "0". If set to "1", communication can be checked, in case of trouble, without using a G3 tester or other tools.
When communication FSK data transmission or reception is made, the data is taken into the buffer. When communication is finished, the data is analysed and printed out. When data is received with the line monitor (SW-A4 No. 8) set to "1" the reception level is also printed out.

SW-A4 No. 8 Line monitor

Normally set to "0". If set to "1", the transmission speed and the reception level are displayed on the LCD. Used for line tests.

SW-A5 No. 1, No. 2 Digital line equalization setting (Reception)

Line equalization when reception is to be set according to the line characteristics.

Setting should be made according to distance between the telephone and the telephone company central switching station.

SW-A5 No. 3, No. 4 Digital line equalization setting (Transmission)

Line equalization when transmitter is to be set according to the line characteristics.
Setting should be made according to distance between the telephone and the telephone company central switching station.

SW-A5 No. 5, No. 6 Digital cable equalizer setting

(Reception for Caller ID)

Line equalization when reception for CALLER ID is to be set according to the line characteristics.
Setting should be made according to distance between the telephone and the telephone company central switching station.

SW-A5 No. 7 Error criterion

Used to select error criterion for sending back RTN when receiving image data.

SW-A5 No. 8 Anti junk fax check

When using the Anti junk fax function, set to "1".

SW-A6 No. 1 Auto gain control (MODEM)

When this mode is enabled, if the reception signal level is under 31dBm, the modem itself controls the signal gain automatically.

SW-A6 No. 2 End buzzer

Setting this bit to 0 will disable the end buzzer (including the error buzzer/on-hook buzzer).

SW-A6 No. 3 Disconnect the line when DIS is received in RX mode

Bit1= 0: When DIS signal is received during RX mode, the line is disconnected immediately.

Bit1= 1: When DIS signal is received during RX mode, the line is disconnected on the next tone.

SW-A6 No. 4 Equalizer freeze control (MODEM)

This switch is used to perform reception operation by fixing the equalizer control of modem for the line which is always in an unfavorable state and picture cannot be received.

* Usually, the control is executed according to the state of line where the equalizer setting is changed always.

SW-A6 No. 5 Equalizer freeze control 7200BPS only

Setting which specifies SW-A3 No. 6 control only in the condition of 7200BPS modem speed.

SW-A6 No. 6 CNG transmission in manual TX mode

When set to "1", fax transmit the CNG signal in case of manual transmission mode (User press the START key after waiting for the fax answering signal from handset or speaker).

SW-A6 No. 7 Reserved

Set to "0".

SW-A6 No. 8 Modem speed automatic fallback when RX level is under -40dBm

When set to "1", if fax signal level is under -40dBm during reception, machine selects the slower modem speed automatically.
It is effective when noises occur on the received document due to the long distance communications.

SW-B1 No. 1 ~ No. 4 Recall interval

Choice is made for a redial interval for speed and rapid dial calls.
Use a binary number to program this. If set to 0 accidentally, 1 will be assumed.

SW-B1 No. 5 ~ No. 8 Recall times

Choice is made as to how many redials there should be.

SW-B2 No. 1 Dialing pause (sec/pause)

Pauses can be inserted between telephone numbers of direct dial connection. Selection of 4 sec or 2 sec pause is available.

SW-B2 No. 2 Dial tone detection (before auto dial)

Used to set YES/NO of dial tone detection in auto dialing.

SW-B2 No. 3 Reserved

Set to "0".

SW-B2 No. 4 Busy tone detection (after auto dial)

Used to set busy tone detection in auto dialing.

SW-B2 No. 5, No. 6 Waiting time after dialing

This is time waiting for the opponent's signals after dialing.

SW-B2 No. 7, No. 8 Reserved

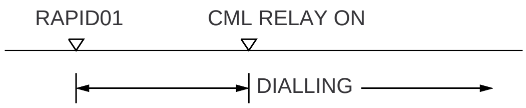
Set to "0".

SW-B3 No. 1 ~ No. 5 Reserved

Set to "0".

SW-B3 No. 6, No. 7 Auto dial mode Delay timer of before line connect

Delay time between the dial key input and line connection under the auto dial mode.



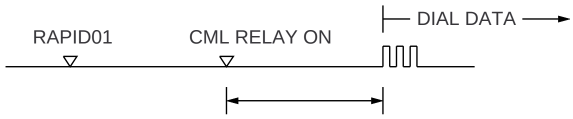
No.6	No.7	
0	0	0sec
0	1	1.5sec
1	0	3.0sec
1	1	4.5sec

SW-B3 No. 8 Hold key

Used to set YES/NO of holding function by the HOLD key.

SW-B4 No. 1, No. 2 Auto dial mode Delay timer of after line connect

Delay time between the line connection and dial data output under the auto dial mode.



No.1	No.2	
0	0	1.7sec
0	1	3.0sec
1	0	3.6sec
1	1	4.0sec

SW-B4 No. 3 Dial mode

When using the pulse dial, set to 1. When using the tone dial, set to 0.

SW-B4 No. 4 Pulse → Tone change function by ⋇ key

When setting to 1, the mode is changed by pressing the ⋇ key from the pulse dial mode to the tone dial mode.

SW-B4 No. 5 Dial pulse make/break ratio (%)

When using the 33% make ratio pulse dial, set to "0".
When using the 40% make ratio pulse dial, set to "1".

SW-B4 No. 6, No. 7 Reserved

Set to "0".

SW-B4 No. 8 Recalling fixed only one time when dialing was unsuccessful without detecting busy tone signal

When dialing results in failure since the busy tone cannot be detected, recalling is fixed to one time.

Supplementary explanation
If time-out termination is made when dialing, only single recall is possible even if the setting time of recalls (SW-B1 No. 5 - No. 8) has been set to some times. This soft switch is added in order to meet FCC.

SW-B5 No. 1 ~ No. 5 DTMF signal transmission level (Low)

The transmission level of DTMF signal is adjusted. (lower frequency)

00000: 0dBm
↓
11111: -15.5dBm (-0.5dBm x 31)

SW-B5 No. 6 ~ No. 8 Reserved

Set to "0".

SW-B6 No. 1 ~ No. 5 DTMF signal transmission level (High)

The transmission level of DTMF signal is adjusted. (higher frequency)

00000: 0dBm
↓
11111: -15.5 dBm (-0.5dBm x 31)

SW-B6 No. 6 Dial tone detection (LCR center call) (UX-465L only)

Used to set YES/NO of dial tone detection (calling LCR center).

SW-B6 No. 7, No. 8 Reserved

Set to "0".

SW-C1 No. 1, No. 2 Reading slice (Binary)

Used to determine the set value of reading density in standard/fine mode. The standard setting is "00" (Factory setting is "00")

SW-C1 No. 3, No. 4 Reading slice (Half tone)

Used to determine the set value of reading density in half tone mode. The standard setting is "00" (Factory setting is "00")

SW-C1 No. 5 Line density selection

Used to set the transmission mode which is automatically selected when the Resolution key is not pressed. In the copy mode, however, the fine mode is automatically selected unless the Resolution key is manually set to another mode.

SW-C1 No. 6 Reserved

Set to "0".

SW-C1 No. 7 MTF correction in half tone mode

This allows selection of MTF correction (dimness correction) in the half tone mode.
When "NO" (=1) is selected, the whole image becomes soft and mild. Clearness of characters will be reduced. Normally set to "YES" (=0).

SW-C1 No. 8 Reserved

Set to "0".

SW-D1 No. 1 ~ No. 4 Number of rings for auto receive

When the machine is set in the auto receive mode, the number of rings before answering can be selected. It may be set from one to four rings using a binary number. Since the facsimile telephone could be used as an ordinary telephone if the handset is taken off the hook, it should be programmed to the user's choice. If the soft switch was set to 1, direct connection is made to the facsimile. If a facsimile calling beep was heard when the handset is taken off the hook, press the START key and put the handset on the hook to have the facsimile start receiving. If it was set to 0 accidentally, receive ring is set to 1.

NOTE: If the machine is set to answer after a large number of rings, it may not be able to receive faxes successfully. If you have difficulty receiving faxes, reduce the number of rings to a maximum of 6.

SW-D1 No. 5 Automatic switching manual to auto receive mode

This soft switch is used to select whether the machine should switch to the auto receive mode after 5 rings in the manual receive mode or remain in the same way as SW-D1 No. 1, No. 2, No. 3 and No. 4 "0"1"0"1"(5 rings).

SW-D1 No. 6 Reserved

Set to "0".

SW-D1 No. 7, No. 8 CI detect frequency

Detection frequency of ring signal for auto reception is set.
When set to No. 6=0, No. 7=0, frequency is set to PTT recommendation.
When set to No. 6=0, No. 7=1, frequency is set to 11.5Hz or more.
When set to No. 6=1, No. 7=0, frequency is set to 13.0Hz or more.
When set to No. 6=1, No. 7=1, frequency is set to 20.0Hz or more.

SW-D2 No. 1 ~ No. 3 Distinctive ringing setting (PATTERN 4 and 5 are for CANADA only) (UX-465L/C only)

This function allows reception of services offered by USA and Canada telephone companies in which the customer contracts with the telephone company to have up to 4 telephone numbers (USA) or 6 telephone numbers (Canada) established for one line.
Each telephone number is signalled by a different ringing pattern, and the customer can allocate each number to a specific use.

<Example of use>

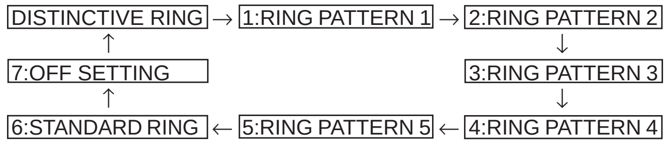
	Phone Number	Intended Purpose	Ring Pattern
Ring Pattern	555-1234	Voice Calls	Standard
	555-1235	Facsimile Calls	Pattern 1
	555-1236	Answering Machine	Pattern 2
	555-1237	PC Modem	Pattern 3

<Distinctive Ringing Timing Specifications>

1) USA



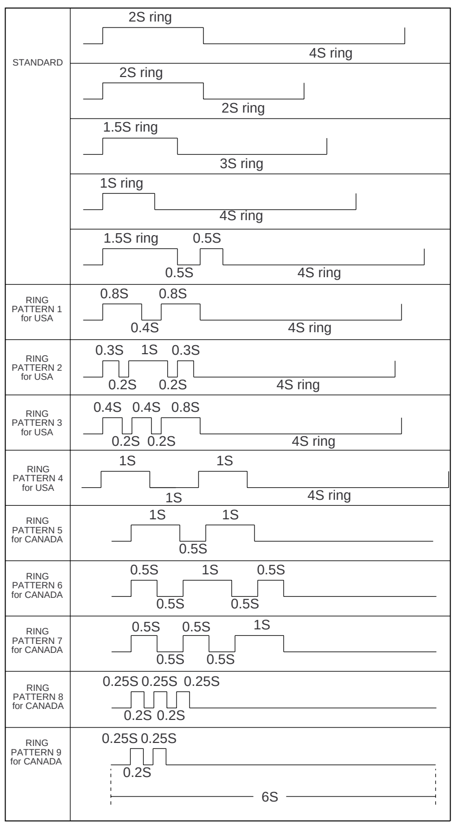
2) Canada



- Ring Pattern
  STANDARD has 5 ring patterns, and DISTINCTIVE has 9 patterns. Ring patterns ①~④ for USA, and ⑤~⑨ for Canada.
  However, to make the setting procedure as easy as possible for the user to understand these patterns are grouped as follows:

<Optional Setting>

Optional Setting	Ring pattern	Country
1) RING PATTERN 1	RING PATTERN ①	for USA
	RING PATTERN ④	for USA
	RING PATTERN ⑤	for Canada
2) RING PATTERN 2	RING PATTERN ②	for USA
	RING PATTERN ⑥	for Canada
3) RING PATTERN 3	RING PATTERN ③	for USA
	RING PATTERN ⑦	for Canada
4) RING PATTERN 4	RING PATTERN ⑧	for Canada
5) RING PATTERN 5	RING PATTERN ⑨	for Canada
6) STANDARD RING		
7) OFF SETTING		



SW-D2 No. 4 Reserved

Set to "0".

SW-D2 No. 5 Caller ID function

Used for Caller ID function.

SW-D2 No. 6 Caller ID detect during CI off

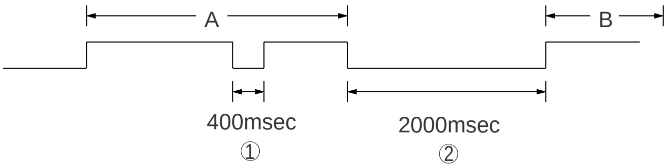
Detection of caller ID signal is performed as follows:
0:First CI OFF only
1:All of CI OFF

SW-D2 No. 7, No. 8 Reserved

Set to "0".

SW-D3 No. 1 ~ No. 5 CI off detection timer (0-1550ms setting by 50ms step)

Set the minimum time period of CI signal interruption which affords to be judged as a CI OFF section with 50ms steps.
(Example)



01110 (50ms ~ 14):
700ms (CI interruption>700ms:Judged as a CI OFF section)
The section 1 is not judged as a CI OFF section, the CI signal A is counted as one signal.
The section 2 is judged as a CI OFF section, the CI signal B is considered as the second signal.
00111 (50ms ~ 7):
350ms (CI interruption>350ms:Judged as a CI OFF section)
The section 1 is judged as a CI OFF section, and the CI signal A is counted as two signals.
The section 2 is judged as a CI OFF section, and the CI signal B is considered as the third signal.

SW-D3 No. 6 ~ No. 8 Reserved

Set to "0".

SW-E1 No. 1 Tel/Fax Automatic switching mode (UX-485LU only)

Used to set auto TEL/FAX switching mode or to set the normal fax mode.

SW-E1 No. 2, No. 3 Pseudo ringing time at the phone/fax automatic switching mode (UX-485LU only)

Choice is made as to how long to rumble the dummy ringer on TEL/FAX automatic switching mode.

SW-E1 No. 4 Number of CNG signal detection at the phone/fax automatic switching mode (UX-485LU only)

Used for detection of CNG in one tone or two tones in the TEL/FAX automatic switching mode.

SW-E1 No. 5 CNG detect time at TEL/FAX mode (UX-485LU only)

The switch which sets the time from the start of CNG detection to the end of detection.

SW-E1 No. 6 ~ No. 8 Reserved

Set to "0".

SW-E2 No. 1 ~ No. 4 Pseudo ringer sound volume (UX-485LU only)

Used to adjust sound volume of pseudo ringer to the line (ringer back tone) generated on selecting TEL/FAX. Setting is the reduce level from -5dBm output level.

SW-E2 No. 5 ~ No. 8 Reserved

Set to "0".

SW-E3 No. 1 ~ No. 8 Reserved

Set to "0".

SW-F1 No. 1, No. 2 DTMF detect time

Used to set detect time of DTMF (Dual Tone Multi Frequency) used in remote reception (5✻✻).

The longer the detect time is, the less the error detection is caused by noises.

SW-F1 No. 3 Protection of remote reception (5✻✻) detect

Used to set the function of remote reception (5✻✻). When set to "1", the remote reception function is disabled.

SW-F1 No. 4 Remote reception with GE telephone

(Corresponding to TEL made by GE) P. B. X.

"1": Compatible with TEL mode by GE

"0": Not compatible

- When sending (5✻✻) for remote reception with a GE manufactured telephone remote reception may not take place because of special specifications in their DTMF.
  To overcome this, a soft SW is provided to change the modem setting to allow for remote reception.
- If this soft SW is set to "1", other telephone sets may be adversely affected.

SW-F1 No. 5 ~ No. 8 Remote operation code figure by external TEL (0 ~ 9)

Remote operation codes can be changed from 0 through 9. If set to greater than 9, it defaults to 9. The "5✻✻" is not changed.
Ex-7✻✻ (Default: 5✻✻)

SW-F2 No. 1 CNG detection in STAND-BY mode

When setting to "1", the CNG signal detection function during standby stops.

SW-F2 No. 2, No. 3 Number of CNG detect (AM mode)

Used for detection of CNG in 1 to 4 pulses.

SW-F2 No. 4, No. 5 Number of CNG detect (STAND-BY mode)

Used for detection of CNG in 1 to 4 pulses.

SW-F2 No. 6 ~ No. 8 Reserved

Set to "0".

SW-G1 No. 1 ~ No. 8 Reserved

Set to "0".

SW-G2 No. 1 ~ No. 8 Reserved

Set to "0".

SW-G3 No. 1 ~ No. 8 Reserved

Set to "0".

SW-H1 No. 1, No. 2 Busy tone detection ON/OFF time (Lower duration)

The initial value of detection is set according to electric condition.

The set value is changed according to the local switch board. (Erroneous detection of sound is reduced.)

Normally the upper limit is set to 900msec, and the lower limit to 200msec.

If erroneous detection is caused by sound, etc., adjust the detection range.

The lower limit can be set in the range of 350msec to 150msec.

SW-H1 No. 3, No. 4 Busy tone detection ON/OFF time (Upper duration)

Similarly to SW-H1 No. 1, the set value can be varied.

The upper limit can be set in the range of 650msec to 2700msec.

SW-H1 No. 1	SW-H1 No. 2	SW-H1 No. 3	SW-H1 No. 4	Detection range
0	0	0	0	150msec ~ 650msec
0	0	0	1	150msec ~ 900msec
0	0	1	0	150msec ~ 1500msec
0	0	1	1	150msec ~ 2700msec
0	1	0	0	200msec ~ 650msec
0	1	0	1	200msec ~ 900msec
0	1	1	0	200msec ~ 1500msec
0	1	1	1	200msec ~ 2700msec
1	0	0	0	250msec ~ 650msec
1	0	0	1	250msec ~ 900msec
1	0	1	0	250msec ~ 1500msec
1	0	1	1	250msec ~ 2700msec
1	1	0	0	350msec ~ 650msec
1	1	0	1	350msec ~ 900msec
1	1	1	0	350msec ~ 1500msec
1	1	1	1	350msec ~ 2700msec

SW-H1 No. 5 Busy tone detect continuation sound detect during OGM

Used to detect the continuous tone of specific frequency during OGM output.

SW-H1 No. 6 Busy tone detect continuation sound detect (during ICM: for internal A.M.)

Used to select detection of the continuous sound of certain frequency.

SW-H1 No. 7 Busy tone detect intermittent sound detect during OGM

Used to detect the intermittent tone of specific frequency during OGM output.

SW-H1 No. 8 Busy tone detect intermittent sound detect (during ICM: for internal A.M.)

Used to select detection of the intermittent sound of certain frequency.

SW-H2 No. 1, No. 2 Busy tone detection pulse number

Used to set detection of Busy tone intermittent sounds.

SW-H2 No. 3 Fax switching when A.M. full

If the answering machine's memory (tape) is full and there is no response, the machine automatically switches to Fax reception.

SW-H2 No. 4 Busy tone detect continuation sound detect frequency

Set detecting frequency of busy tone continuation sound for 320 ~ 570 Hz of 320 ~ 460 Hz.

SW-H2 No. 5, No. 6 Reserved

Set to "0".

SW-H2 No. 7 AM OGM announce only mode

If this switch is set to 1, the machine is not recording ICM.
(disconnect the line after OGM output)

SW-H2 No. 8 Busy tone continuous sound detect time

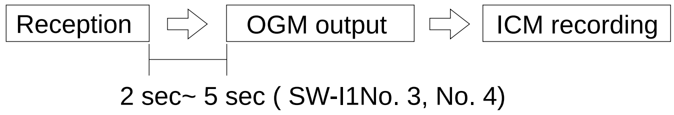
Set detecting time busy tone continuous sound for 5 or 10 seconds.

SW-I1 No. 1, No. 2 ICM recording time

Used to select the incoming message recording time among 15sec/30sec/60sec/4min.

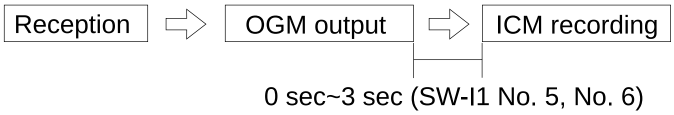
SW-I1 No. 3, No. 4 A.M. quiet time 1

Used to select four kinds of no sound time (2 sec ~ 5 sec) after reception in the T.A.D mode until OGM is output.



SW-I1 No. 5, No. 6 A.M. quiet time 2

Used to select four kinds of no sound time (0 sec ~ 3 sec) after OGM output the T.A.D mode until ICM recording is started.



SW-I1 No. 7 Key input buzzer on/off switch (Two way recording mode)

Used to turn ON/OFF key input buzzer in the TWO-WAY recording mode.

SW-I1 No. 8 CPC signal detection (UX-465L/C only)

Used to turn ON/OFF the CPC (Calling Party Control) signal detection.

SW-I2 No. 1 ~ No. 5 A.M. quiet detect time

Used to set no sound time (0 sec ~ 32 sec) during the T.A.D. mode operation.

SW-I2 No. 6 ~ No. 8 CPC detection time (UX-465L/C only)

Used to set the CPC (Calling Party Control) signal detect time.

SW-I3 No. 1 Reserved

Set to "0".

SW-I3 No. 2 Max OGM record time

Used select the outgoing message recording time for 60sec or 15sec.

SW-I3 No. 3 Two way record function

If this switch is set to "1", machine doesn't work two way recording function.

SW-I3 No. 4 Toll saver

Used to turn on the toll saver function. If it is off, the reception frequency in the AM mode is indentical with that in the FAX mode.

SW-I3 No. 5 ~ No. 7 Reserved

Set to "0".

SW-I3 No. 8 Transfer dial recall

If this switch is set to "1", machine disable redial in Transfer function.

SW-I4 No. 1 ~ No. 4 AGC maximum gain (Line) (10 ~ 25dB) (1dB step)

The AGC Maximum Gain limits the gain applied by the AGC. Message with average energy below the AGC Energy Reference Level will have their average energy level increased by no more than the AGC Maximum Gain. The AGC Maximum Gain should average energy of the message with the lowest average energy to the AGC Energy Reference Level.

SW-I4 No. 5 ~ No. 8 AGC maximum gain (Mic) (10 ~ 25dB) (1dB step)

The AGC Maximum Gain limits the gain applied by the AGC. Message with average energy below the AGC Energy Reference Level will have their average energy level increased by no more than the AGC Maximum Gain. The AGC Maximum Gain should average energy of the message with the lowest average energy to the AGC Energy Reference Level.

SW-I5 No. 1 ~ No. 4 AGC eref access code (Line) (-0 ~ -30dB) (2dB step)

The AGC Energy Reference Level controls the playback level. Any message having average speech energy above the energy reference level has its playback level attenuated, and any level has its playback level increased. If the playback level is too high (low), then decreasing (increasing) the AGC energy Reference level will achieve the desired level.

SW-I5 No. 5 ~ No. 8 AGC eref access code (Mic)
(-0 ~ -30dB) (2dB step)

The AGC Energy Reference Level controls the playback level. Any message having average speech energy above the energy reference level has its playback level attenuated, and any level has its playback level increased. If the playback level is too high (low), then decreasing (increasing) the AGC energy Reference level will achieve the desired level.

SW-I6 No. 1 ~ No. 4 AGC gain adaptation threshold (Line)

The AGC adjusts the amount of gain applied to the incoming message only when the average energy exceeds the AGC Gain Adaptation Threshold. The AGC Gain Adaptation Threshold prevents message background noise from corrupting the gain provided that the AGC Gain Adaptation Threshold is greater than the background noise energy. In the event that a message has background noise energy greater than the AGC Gain Adaptation Threshold, the AGC Gain can be no greater than the AGC Maximum Gain. Note that the AGC Gain Adaptation Threshold must always be greater than the RPACS VOX Turn-On Threshold.

SW-I6 No. 5 ~ No. 8 AGC gain adaptation threshold (Mic)

The AGC adjusts the amount of gain applied to the incoming message only when the average energy exceeds the AGC Gain Adaptation Threshold. The AGC Gain Adaptation Threshold prevents message background noise from corrupting the gain provided that the AGC Gain Adaptation Threshold is greater than the background noise energy. In the event that a message has background noise energy greater than the AGC Gain Adaptation Threshold, the AGC Gain can be no greater than the AGC Maximum Gain. Note that the AGC Gain Adaptation Threshold must always be greater than the RPACS VOX Turn-On Threshold.

SW-I7 No. 1, No. 2 AGC slew rate (Line)

The AGC Slew Rate controls the convergence of the message playback level to the desired playback level. A large slew rate will allow faster convergence and a small slew rate will allow slower convergence.

SW-I7 No. 3, No. 4 AGC slew rate (Mic)

The AGC Slew Rate controls the convergence of the message playback level to the desired playback level. A large slew rate will allow faster convergence and a small slew rate will allow slower convergence.

SW-I7 No. 5 ~ No. 8 Reserved

Set to "0".

SW-J1 No. 1 Activity report print

This soft switch is used to select: whether or not to print out the activity report when the memory is full. An activity report can be printed when the following key entry command is made.

"FUNCTION", "2", "#", "START"

After producing the activity report, all the data in the memory will be cleared.

When the switch function is set to "0" (no), the data in the memory will be deleted from the oldest as it reaches the maximum memory capacity.

SW-J1 No. 2 Total communication hours and pages print

Used to make a choice of whether the total communication time and pages are recorded in the activity report.

SW-J1 No. 3 Sender’s phone number setting

Used to make a choice of whether the registered sender’s phone number can be changed or not. If the switch is set to "1", new registration of the sender’s phone number is disabled to prevent accidental wrong input.

SW-J1 No. 4, No. 5 Reserved

Set to "0".

SW-J1 No. 6 Summer time setting (UX-465L/C only)

This is used to set YES/NO of automatic clock adjustment for European Summer time.

SW-J1 No. 7, No. 8 Ringer volume

Used to adjust ringing volume.

SW-J2 No. 1, No. 2 Reserved

Set to "0".

SW-J2 No. 3 Polling key

If this switch is set to 1, the last of Rapid key works as polling key.

SW-J2 No. 4, No. 5 Handset receiver volume (UX-465L/C only)

Used to adjust sound volume from a handset receiver volume.

SW-J2 No. 6 ~ No. 8 Speaker volume (5 stages)

Used to adjust sound volume from a speaker.

SW-J3 No. 1 Automatic cover sheet

The machine automatically generates a cover sheet and sends it as the last page of each transmission.

SW-J3 No. 2 ~ No. 4 Communication result printout (Transaction report)

Every communication, the result can be output. As usual, it is set to print the timer sending communication error alone. If No. 2: 0 No. 3: 1 No. 4: 0 are set, printing is always on (printed even if it is normally ended).

000: Error, timer and memory sending/receiving

001: Sending

010: Continuous printing

011: Not printed

100: Communication error

SW-J3 No. 5 ~ No. 8 OGM/ICM output level to speaker
(0dB ~ -15dB) (1dB step)

Used to control OGM and ICM output level to speaker.

SW-K1 No. 1 Entering DIAG mode by pressing SPEED key

A bit which is used in the production process only. When the SPEED key is pressed, the switch is changed from the stand-by state to the DIAG mode.

SW-K1 No. 2 Reserved

Set to "0".

SW-K1 No. 3 ~ No. 8 OGM/ICM output level to Line
(0dB ~ -32dB) (1dB step)

Used to control OGM and ICM output level to Line.

SW-L1 No. 1 ~ No. 4 Reserved

Set to "0".

SW-L1 No. 5 Cut off mode (COPY mode)

Whether the excessive part is printed on the next recording paper or discarded is selected to copy a document which is longer than the recording paper.

SW-L1 No. 6 A4 Paper enable

The use of recording paper of A4 is enabled.

SW-L1 No. 7 LEGAL and LETTER paper enable

The use of recording paper of LEGAL and LETTER is enabled.

SW-L1 No. 8 2 IN 1 mode

A function to print transmitted data of two pages on one sheet.

SW-L2 No. 1, No. 2 Paper set size

At present size of the recording paper.

SW-L2 No. 3 Automatic reduce of receive

If set to 1, it is reduced automatically when receiving.

SW-L2 No. 4 Print contrast

0: Normal
1: Light

SW-L2 No. 5 Reception reduction ratio in case of memory full

This model is designed so that the print is started according to the setting of SW-L2 No.3 when reception of one page is completed. However, if the memory is filled with data before completion of reception of one page, the print is started with the reduction ratio which is set with this switch.

SW-L2 No. 6 ~ No. 8 Reserved

Set to "0".

SW-M1 No. 1 ~ No. 8 Reserved

Set to "0".

SW-M2 No. 1 ~ No. 8 Reserved

Set to "0".

SW-N1 No. 1 ~ No. 6 LCR short time (UX-465L only)

First time setting transmitting to the Open LCR center.

SW-N1 No. 7, No. 8 Reserved

Set to "0".

SW-N2 No. 1 ~ No. 6 LCR long time (UX-465L only)

Second time setting transmitting to the Open LCR center.

SW-N2 No. 7, No. 8 Reserved

Set to "0".

SW-N3 No. 1 LCR Time Select (UX-465L only)

Used to select LCR short time or LCR long time.

0:LCR short time is selected.
1:LCR long time is selected.

SW-N3 No. 2 Temporary release of caller ID withhold (UX-465L only)

Used to do temporary release of caller ID withhold.

0:Normal dialing.
1:Release of caller ID withhold before dialing.

SW-N3 No. 3 Connect Japanese center (UX-465L only)

Used to connect Japanese open LCR center.

0:Connect USA open LCR center.
1:Connect Japanese open LCR center.

SW-N3 No. 4 Open LCR debug mode (UX-465L only)

Used to debug open LCR function.

0:Normal mode.
1:debug mode.

SW-N3 No. 5 ~ No. 8 Reserved

Set to "0".

[3] Troubleshooting

Refer to the following actions to troubleshoot any of the problems mentioned in 1-4.

[1] A communication error occurs.

[2] Image distortion produced.

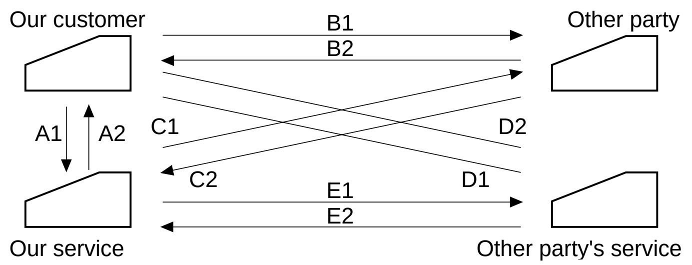
[3] Unable to do overseas communication.

[4] Communication speed slow due to FALLBACK.

- Increase the transmission level SOFT SWITCH A4-1, 2, 3, 4, 5. May be used in case [1] [2] [3].
- Decrease the transmission level SOFT SWITCH A4-1, 2, 3, 4, 5. May be used in case [3].
- Apply line equalization SOFT SWITCH A5-1, 2. May be used in case [1] [2] [3] [4].
- Slow down the transmission speed SOFT SWITCH A2-1, 2, 3, 4. May be used in case [2] [3].
- Replace the TEL/LIU PWB. May be used in all cases.
- Replace the control PWB. May be used in all cases.

* If transmission problems still exist on the machine, use the following format and check the related matters.

TO:	ATT:	Ref.No. :
CC:	ATT:	Date :
FM:		Dept :
		Sign :

***** Facsimile communication problem *****			Ref.No.:
From: Mr.	Fax Tel No.:		Date:
Our customer	Name		Tel No.
	Address		Fax No.
	Contact person		Model name
Other party	Name		Tel No.
	Address		Fax No.
	Contact person		Model name
Problem mode	Line: Domestic / international	Model: G3	Phase: A, B, C, D.
	Reception / Transmission	Automatic reception / Manual reception	
		Automatic dialing / Manual dialing / Others	
Frequency: %		ROM version:	
Confirmation item			Please mark problem with an X. No problem is: 0.
			A1 / A2 / B1 / B2 / C1 / C2 / D1 / D2 / E1 / E2
			Transmission level setting is ( ) dB at our customer
			Transmission level ( ) dBm Reception level ( ) dBm By level meter at B1 and B2
Comment			
Countermeasure			
**** Please attach the G3 data and activity report on problem. ****			

* Please complete this report before calling the “TAC” hotline if problem still occurs.

[4] Error code table

1. Communication error code table

G3 Transmission

Code	Final received signal	Error Condition (Receiver side)
0	Incomplete signal frame	Cannot recognize bit stream after flag
1	NSF, DIS	Cannot recognize DCS signal by echo etc. Cannot recognize NSS signal (FIF code etc)
2	CFR	Disconnects line during reception (carrier missing etc)
3	FTT	Disconnects line by fall back
4	MCF	Disconnects line during reception of multi page Cannot recognize NSS, DCS signal in the case of mode change
5	PIP or PIN	The line is hung up without replying to telephone request from the receiving party.
6	RTN or RTP	Cannot recognize NSS, DCS signal after transmit RTN or RTP signal.
7	No signal or DCN	No response in receiver side or DCN signal received* (transmitter side)
8	–	Owing to error in some page the error could not be corrected although the specified number of error retransmissions were attempted.
11	–	Error occurred after or while reception by the remote (receiving) machine was revealed to be impossible.
12	–	Error occurred just after fallback.
13	–	Error occurred after a response to retransmission end command was received.

G3 Reception

Code	Final received signal	Error Condition (Receiver side)
0	Incomplete signal frame	Cannot recognize bit stream after flag
1	NSS, DCS	Cannot recognize CFR or FTT signal Disconnects line during transmission (line error)
2	NSC, DTC	Cannot recognize NSS signal (FIF code etc)
3	EOP	Cannot recognize MCF, PIP, PIN, RTN, RTP signal
4	EOM	Cannot recognize MCF, PIP, PIN, RTN, RTP signal in the case of mode change
5	MPS	The line is hung up without replying to communication request.
6	PR1-Q	Cannot recognize PIP, PIN signal in the case of TALK request
7	No signal or DCN	No response in transmitter (cannot recognize DIS signal) or DCN signal received* (receiver side)
8	–	Error occurred upon completion of reception of all pages.
9	–	Error occurred when mode was changed or Transmission/Reception switching was performed.
10	–	Error occurred during partial page or physical page reception.
11	–	Error occurred after or during inquiry from the remote (transmitting) machine as to whether reception is possible or not.
12	–	Error occurred during or just after fallback.
13	–	Error occurred after the retransmission end command was received.

MEMO

CHAPTER 3. MECHANISM BLOCKS

[1] General description

1. Document feed block and diagram

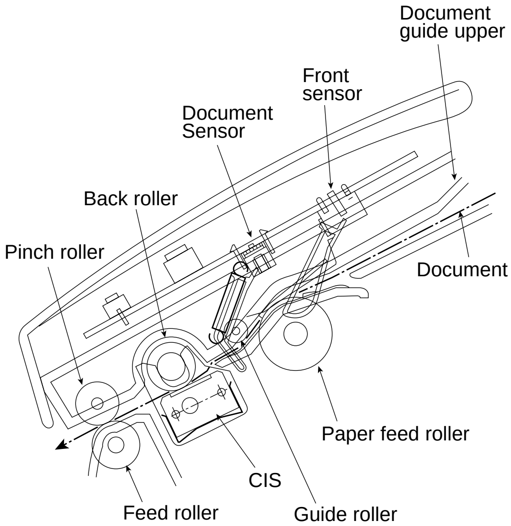


Fig. 1

2. Document feed operation

1) The original, which is set in the document hopper, feeds automatically when the front sensor is activated. This in turn activates the pulse motor which drives the document supply roller. The document stops when the lead edge is detected by the document sensor.

2) The lead edge of the original is fed a specified number of pulses after the lead edge of the document is detected for the reading process to begin.

3) The trailing edge of the original is fed a specific number of pulses after the trailing edge of the document deactivates the document sensor. The read process then stops and the original is discharged.

4) When the front sensor is in the OFF state (any document is not set up in the hopper guide), the drive will be stopped when the document is discharged.

3. Hopper mechanism

3-1. General view

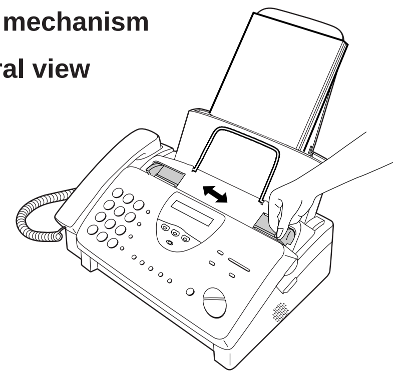


Fig. 2

The hopper section contains document guides that are used to adjust the hopper to the width of the original document. This ensures that the original feeds straight into the fax machine for scanning.
Document width: 148 mm to 216 mm (A5 longitudinal size to Letter longitudinal size)
NOTE: Adjust the document guide after setting up the document.

3-2. Automatic document feed

1) Use of the paper feed roller and separation rubber plate ensures error-free transport and separation of documents. The plate spring presses the document to the paper feed roller to assure smooth feeding of the document.

2) Document separation method: Separation rubber plate

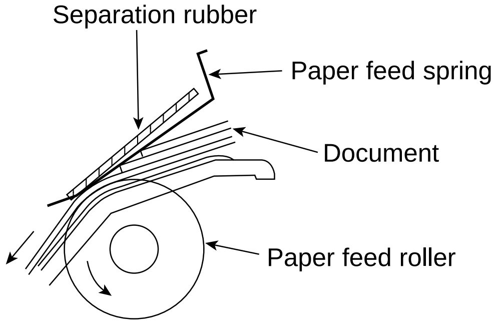


Fig. 3

3-3. Documents applicable for automatic feed

	4x6 series (788mm x 1091mm x 1000 sheets)		Square meter series	
	Minimum	Maximum	Minimum	Maximum
Feeder capacity	10 sheets, max.			
Paper weight	45kg	64.3kg	52g/m^2	74.3g/m^2
Paper thickness (ref.)	0.06mm	0.09mm	0.06mm	0.09mm
Paper size	148mm x 140mm ~ A4 (210mm x 297mm), Letter (216mm x 279mm)			

NOTE: Double-side coated documents and documents on facsimile recording paper should be inserted manually. The document feed quantity may be changed according to the document thickness.

Documents corresponding to a paper weight heavier than 64.3kg (74.3g/m^2) and lighter than 135kg (157g/m^2) are acceptable for manual feed.

Documents heavier than 135kg in terms of the paper weight must be duplicated on a copier to make it operative in the facsimile.

3-4. Loading the documents

1) Make sure that the documents are of suitable size and thickness, and free from creases, folds, curls, wet glue, wet ink, clips, staples and pins.

2) Place documents face down in the hopper.

   i) Adjust the document guides to the document size.

   ii) Align the top edge of documents and gently place them into the hopper. The first page under the stack will be taken up by the feed roller to get ready for transmission.

NOTES: 1) Curled edge of documents, if any, must be straightened out.

2) Do not load the documents of different sizes and/or thicknesses together.

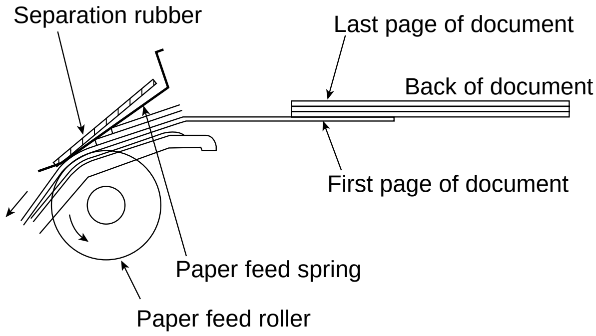


Fig. 4

3-5. Documents requiring use of document carrier

1) Documents smaller than 148mm (W) x 140mm (L).
2) Documents thinner than the thickness of 0.06mm.
3) Documents containing creases, folds, or curls, especially those whose surface is curled (maximum allowable curl is 5mm).
4) Documents containing tears.
5) Carbon-backed documents. (Insert a white sheet of paper between the carbon back and the document carrier to avoid transfer of carbon to the carrier.)
6) Documents containing an easily separable writing material (e.g., those written with a lead pencil).
7) Transparent documents.
8) Folded or glued documents.

   Document in document carrier should be inserted manually into the feeder.

4. Document release

4-1. General

To correct a jammed document or to clean the document running surface, pull the insertion side of document center of the operation panel. To open the upper document guide, the operation panel must be opened first.

4-2. Cross section view

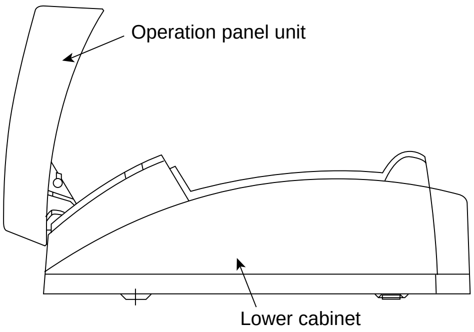


Fig. 5

5. Recording block

(1) General view

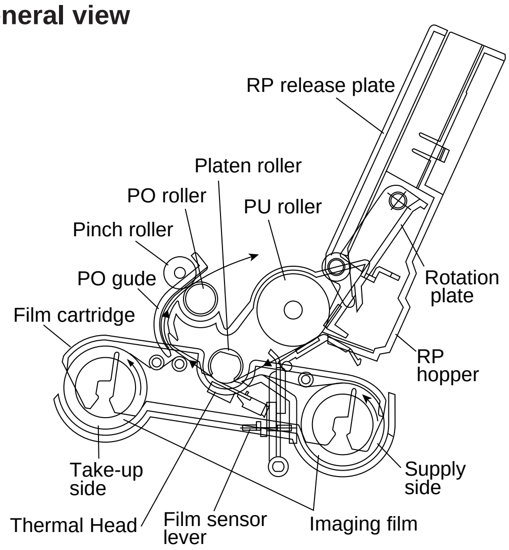


Fig. 6

5-1. Driving

In the drive mechanism, the rotating force of the pulse motor for both transmission and reception is transmitted to the paper supply roller, the recording paper feed roller and imaging film drive gear through the pulse motor axle gear, reduction gear and planetary gear.

5-2. Recording

This equipment employs the thermal transcription system which used the thermal head imaging film.

1) Thermal head

The thermal head is composed of 2,016 heating elements in traverse line, and the resolution power is 8 dots/mm. The maximum speed is 10 ms/line.

2) Structure of recording mechanism

Recording is achieved by applying a suitable pressure to the thermal head through the imaging film of the recording paper feed roller and the recording paper.
The main scanning is electronically done, and the sub-scanning is me chanically done (by sending the recording paper with the recording paper feed roller).

3) Recording paper transfer sequence

a) The recording paper stored in the RP hopper is fed with the PU roller, and the recording paper is stopped when the P-IN sensor is turned on by sensing its lead edge.

b) Hereafter, the imaging film and recording paper are transferred with the recording paper feed roller, and thermal transcription is done on the recording paper.

c) After thermal transcription, the imaging film is taken up by the roller on the take-up side, and the recording paper is discharged by the PO roller.

   As basic, the density unevenness mainly results from the longitudinal misalignment of the thermal head to the heater line. Otherwise, the head is in uneven contact with the recording paper feed roller, or the imaging film is wrinkled.

   The following items are described as the simplified checking method.

① Are the power and signal cables of the thermal head suitably treated?

② Does the same symptom appear even if the thermal head pres-sure spring is replaced?

③ Is the feed roller of the recording paper concentric? (Density is uneven at intervals.)

④ Does the same symptom appear even if the thermal head is replaced?

⑤ Is the imaging film stained or wrinkled?

[2] Disassembly and assembly procedures

- This chapter mainly describes the disassembly procedures. For the assembly procedures, reverse the disassembly procedures.
- Easy and simple disassembly/assembly procedures of some parts and units are omitted. For disassembly and assembly of such parts and units, refer to the Parts List.
- The numbers in the illustration, the parts list and the flowchart in a same section are common to each other.
- To assure reliability of the product, the disassembly and the assembly procedures should be performed carefully and deliberately.

1	Bottom plate

Parts list (Fig. 1)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	5	CIS earth cable	1
2	Screw (3×10)	9	6	Roller earth cable	1
3	Screw (3×6)	1	7	Screw (3×5)	1
4	Head earth cable	1	8	Bottom plate	1

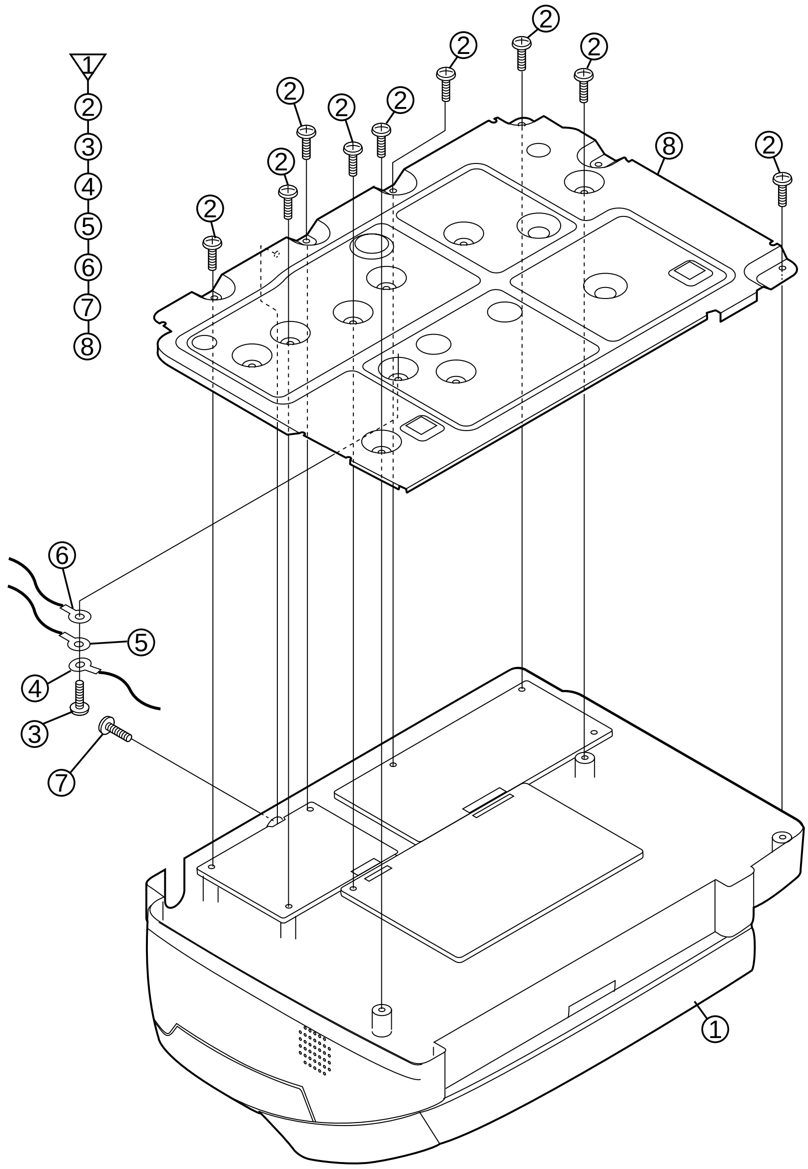


Fig. 1

2	PWB's, drive unit, AC cord ass'y and speaker

Parts list (Fig. 2)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	7	Screw (4×6)	1
2	Connector	2	8	AC cord ass'y	1
3	Cable	6	9	Screw (3×10)	2
4	Control PWB unit	1	10	Drive unit	1
5	TEL/LIU PWB unit	1	11	Speaker hold spring	1
6	Power supply PWB unit	1	12	Speaker	1

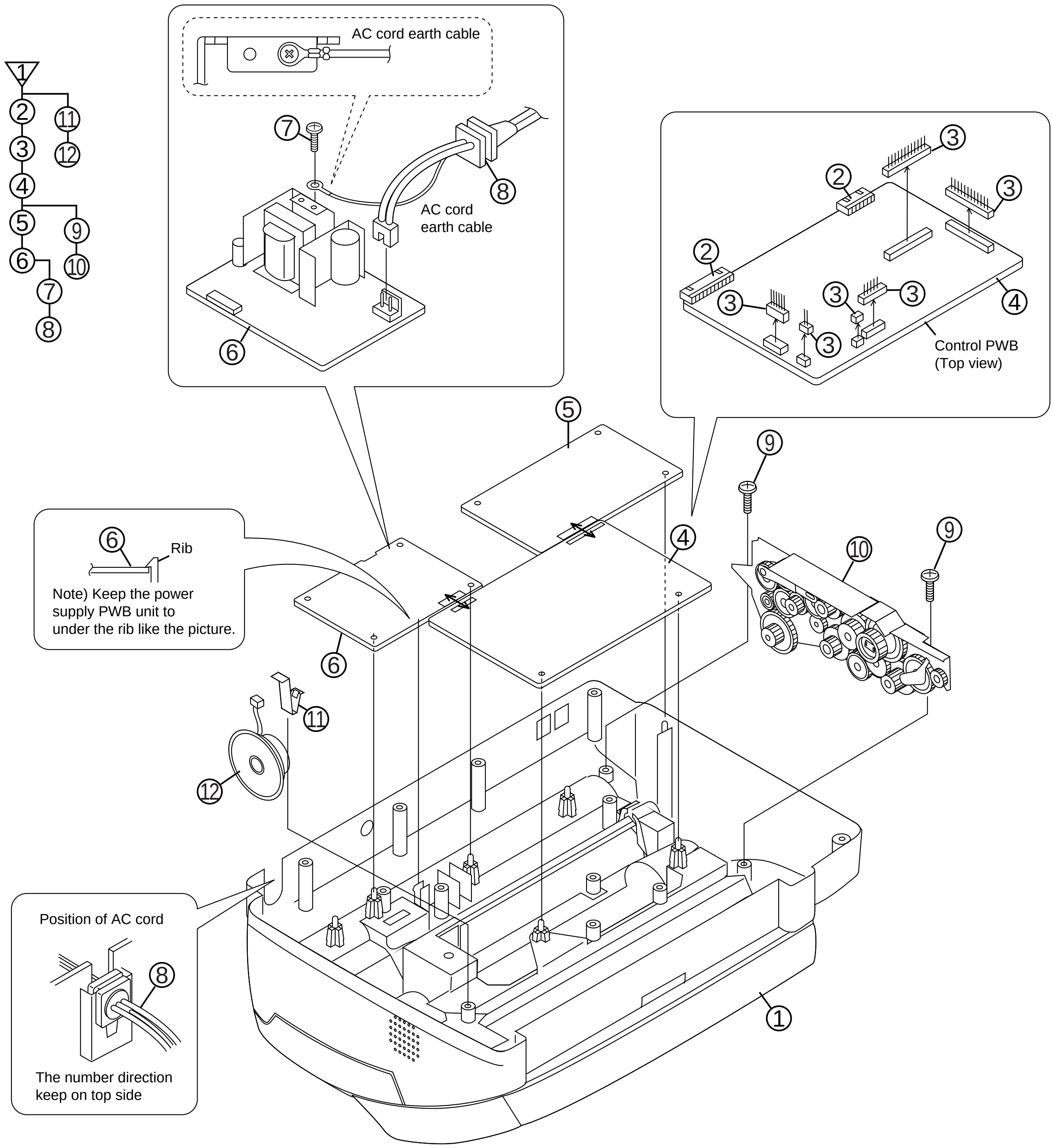
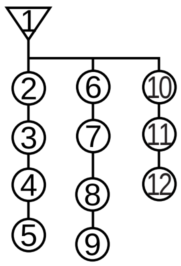


Fig. 2

3	Paper roller etc. and sensor lever

Parts list (Fig. 3)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	7	Platen lock lever, left	1
2	Sheet A	1	8	Platen lock lever, right	1
3	P-IN sensor lever B	1	9	Platen lock lever spring	1
4	Screw (3×10)	1	10	PO roller	1
5	BT gear ass'y	1	11	Transfer bearing	2
6	Platen lock bracket	1	12	Back roller gear	1



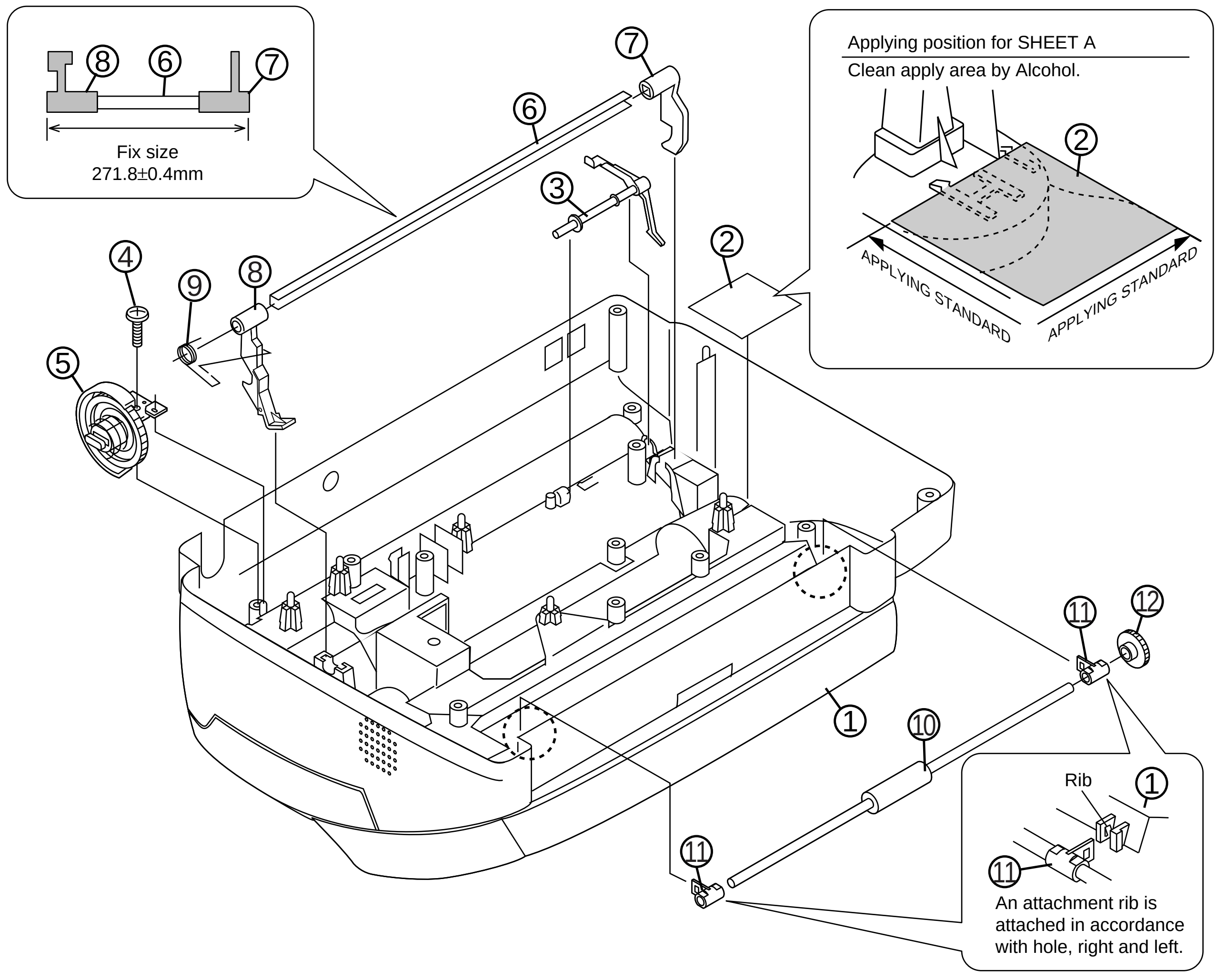


Fig. 3

4 Drive frame

Parts list (Fig. 4)

No.	Part name	Q'ty	No.	Part name	Q'ty	No.	Part name	Q'ty
1	Screw (3×10)	2	9	Idler gear, 52Z	1	17	Reduction gear, 4	1
2	Motor	1	10	Reduction gear, 3	1	18	Planet gear lever C ass'y	1
3	Motor plate	1	11	Reduction gear, 2	1	19	Planet gear lever B ass'y	1
4	Take up gear	1	12	Reduction gear, 5	1	20	Reduction gear, 1	1
5	Slip gear ass'y	1	13	Reduction gear C	1	21	Cam hold spring	1
6	Reduction gear, 6	1	14	Link lever	1	22	Cam A	1
7	Planet gear lever D ass'y	1	15	Planet gear lever A ass'y	1	23	Cam B	1
8	Idler gear B	1	16	Idler gear, 30Z	3	24	Cam switch	1
						25	Drive frame	1

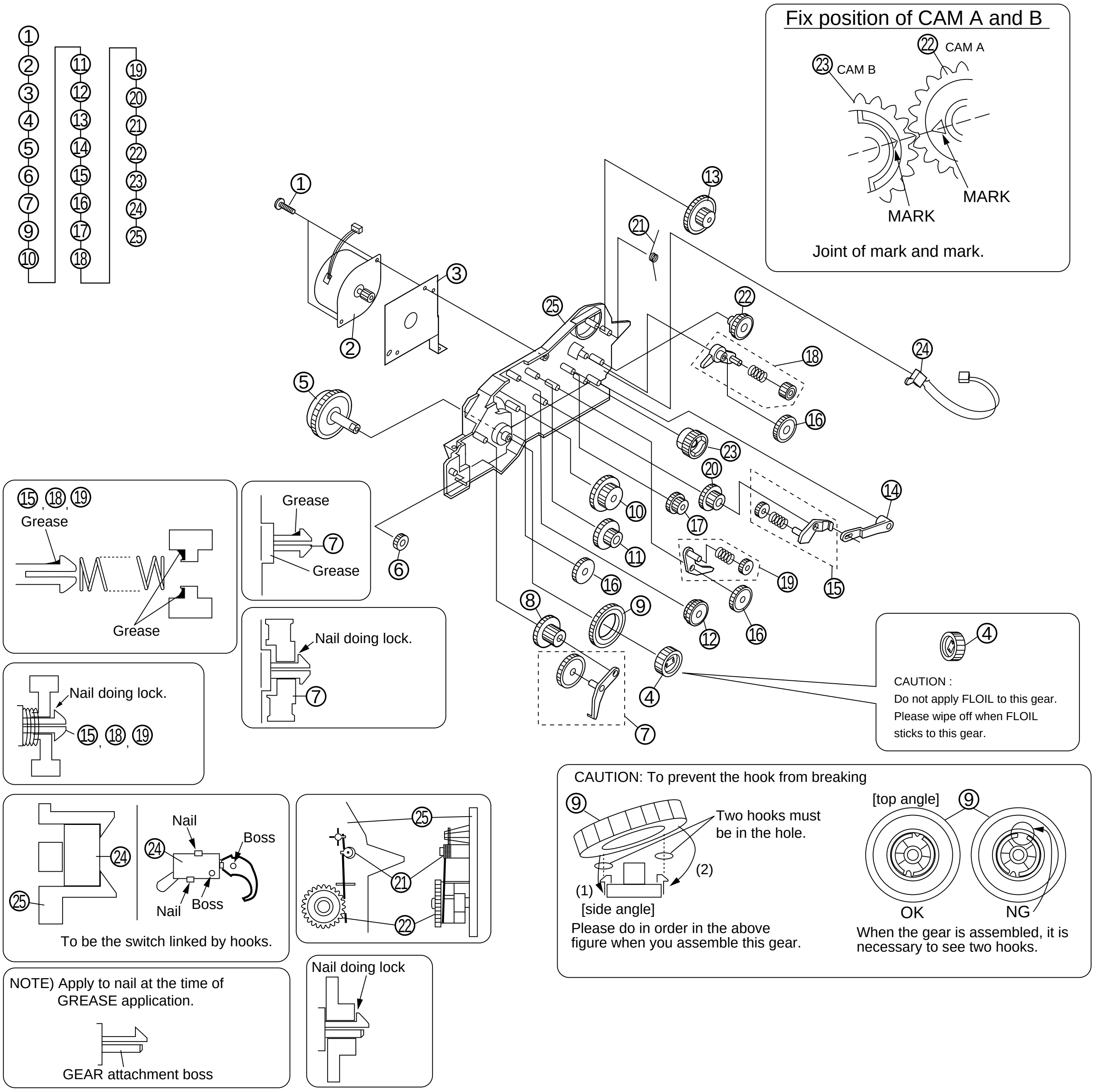
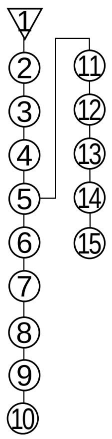


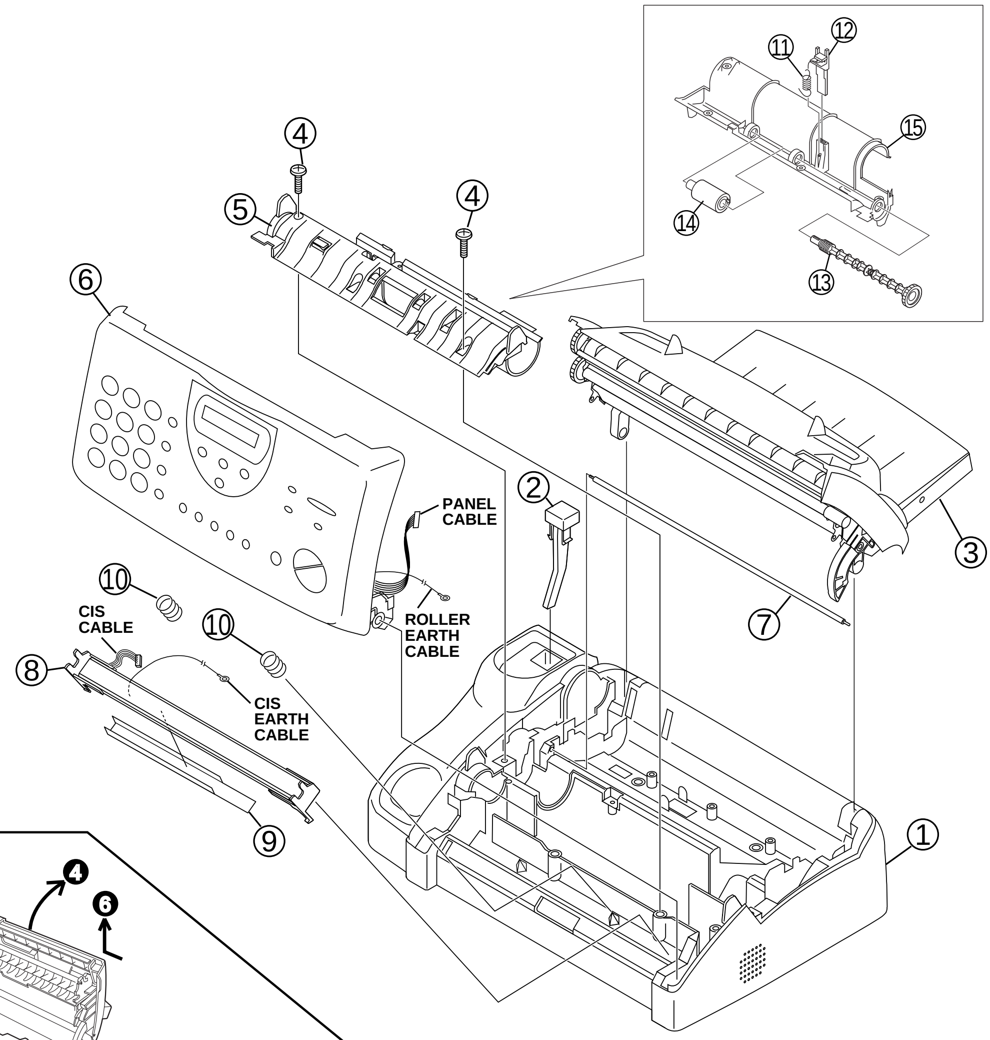
Fig. 4

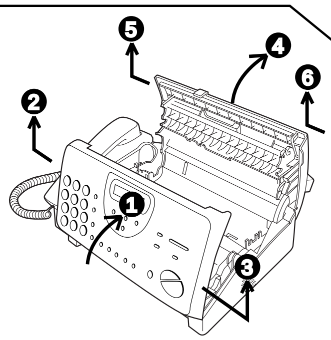
5	Sub frame unit, original paper guide, operation panel unit and CIS unit

Parts list (Fig. 5)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	8	CIS unit	1
2	Hook switch lever	1	9	CIS earth sheet	1
3	Sub frame unit	1	10	CIS spring	2
4	Screw (3×10)	2	11	Cover switch spring	1
5	Original paper guide unit	1	12	Cover switch lever	1
6	Operation panel unit	1	13	Feed roller shaft	1
7	Film guide shaft	1	14	Feed roller	1
			15	Original paper guide	1







Operation panel unit disassembly

❶ Close the operation panel unit from the FULL OPEN position.
❷ Shift the operation panel unit to the left side, and remove the left-side fulcrum.
❸ Shift the operation panel unit to the right side, and remove the right-side fulcrum.

Sub frame unit disassembly

❹ Fully open the sub frame unit.
❺ Shift the sub frame unit to the left side, and remove the left-side fulcrum.
❻ Shift the sub frame unit to the left side, and remove the right-side fulcrum.

Fig. 5

6	Upper cabinet and document guide upper unit

Parts list (Fig. 6)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Screw (3×8)	2	7	Operation panel PWB	1
2	Document guide upper unit	1	8	Direct key	1
			9	Mode key	1
3	Operation panel unit	1	10	Stop key	1
4	Screw (2×6)	5	11	Start key	1
5	Cable	1	12	12 key	1
6	Insulation sheet	1	13	TAD Key	1
			14	Upper cabinet	1

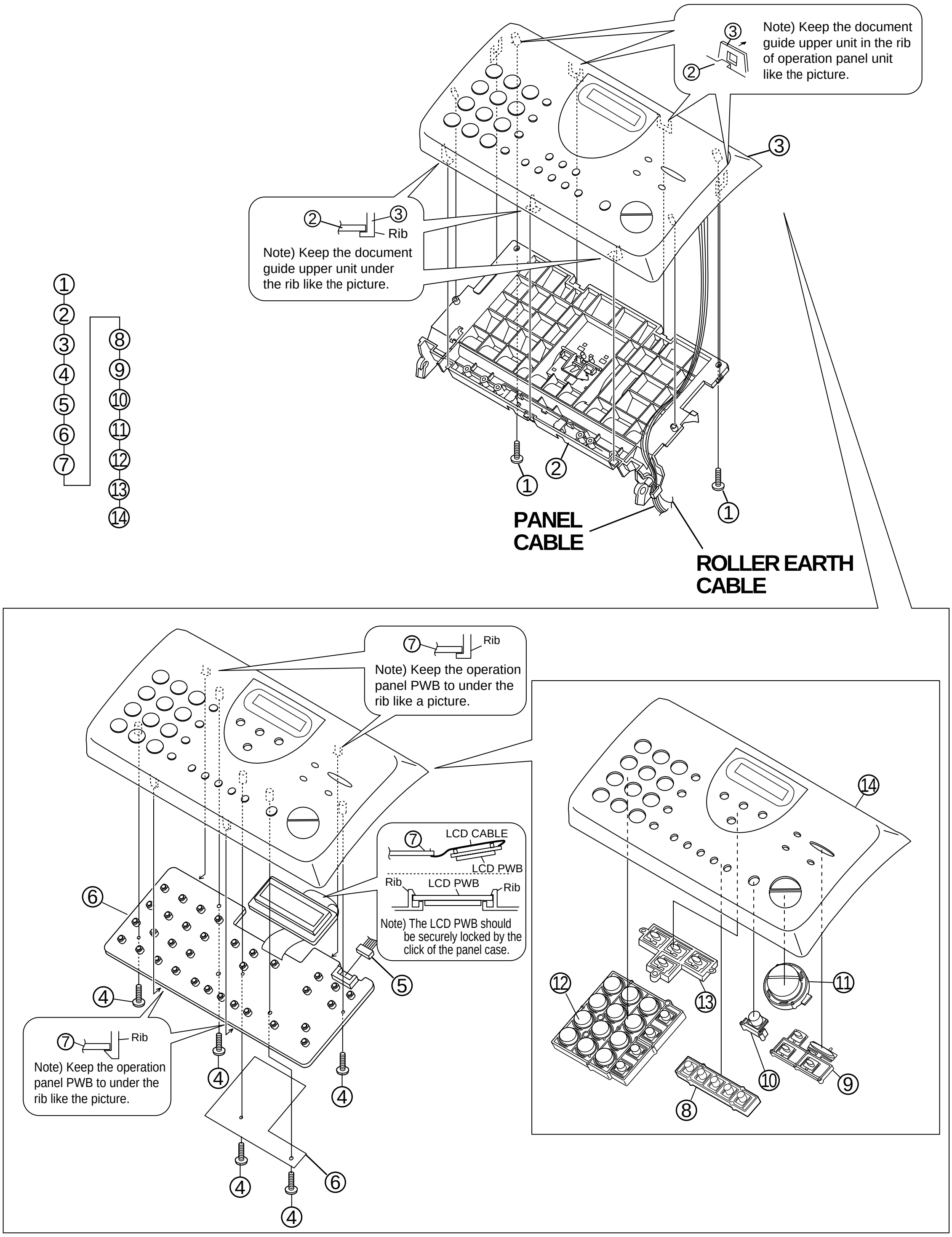


Fig. 6

7 Document guide upper

Parts list (Fig. 7)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Back roller gear	1	8	Pinch roller shaft	1
2	Transfer bearing	1	9	Separate spring	1
3	Roller earth plate	1	10	Separator plate	1
4	Earth gum	1	11	Paper feed spring	1
5	Back roller	1	12	Separator rubber	1
6	Pinch roller spring	2	13	Guide roller	1
7	Pinch roller	2	14	Document guide upper	1

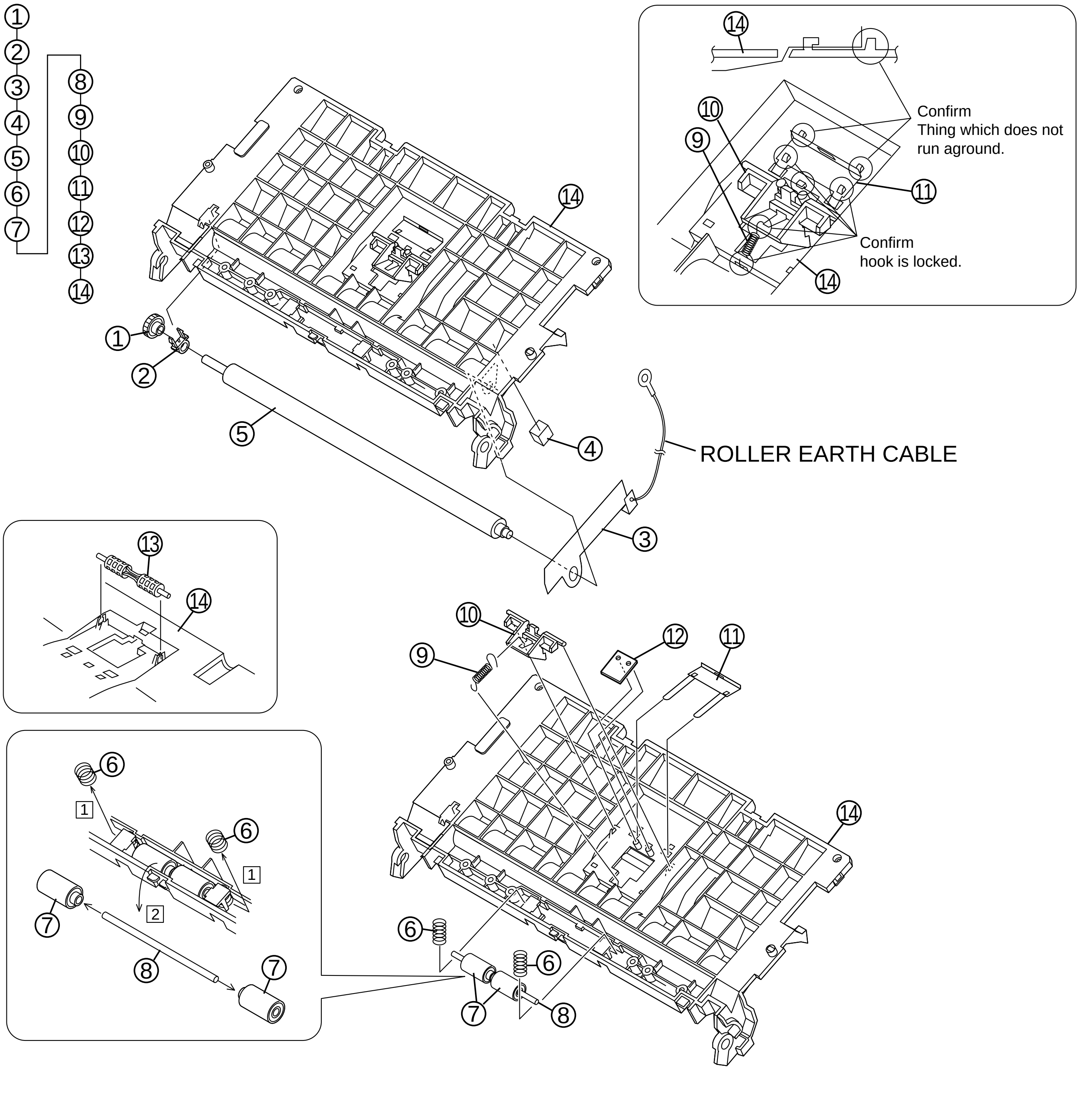
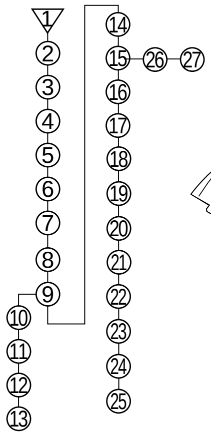


Fig. 7

8 Sub frame, top cover unit RP hopper unit

Parts list (Fig. 8)

No.	Part name	Q'ty	No.	Part name	Q'ty	No.	Part name	Q'ty
1	Top cover unit	1	10	PO guide ass'y	1	19	Platen bearing, right	1
2	Screw (3×10)	2	11	PO pinch roller spring	2	20	Platen roller	1
3	Sub frame unit	1	12	PO pinch roller	2	21	PU shaft	1
4	Screw (3×10)	2	13	PO guide	1	22	PU roller ass'y	1
5	RP hopper unit	1	14	PO gear	1	23	P-IN sensor lever spring	1
6	Sub frame ass'y	1	15	PO roller ass'y	1	24	P-IN sensor lever	1
7	Screw (3×10)	1	16	Film guide shaft	1	25	Sub frame	1
8	Tension gear	1	17	Platen gear	1	26	PO roller rubber	2
9	Tension spring	1	18	Platen bearing, left	1	27	PO roller shaft	1



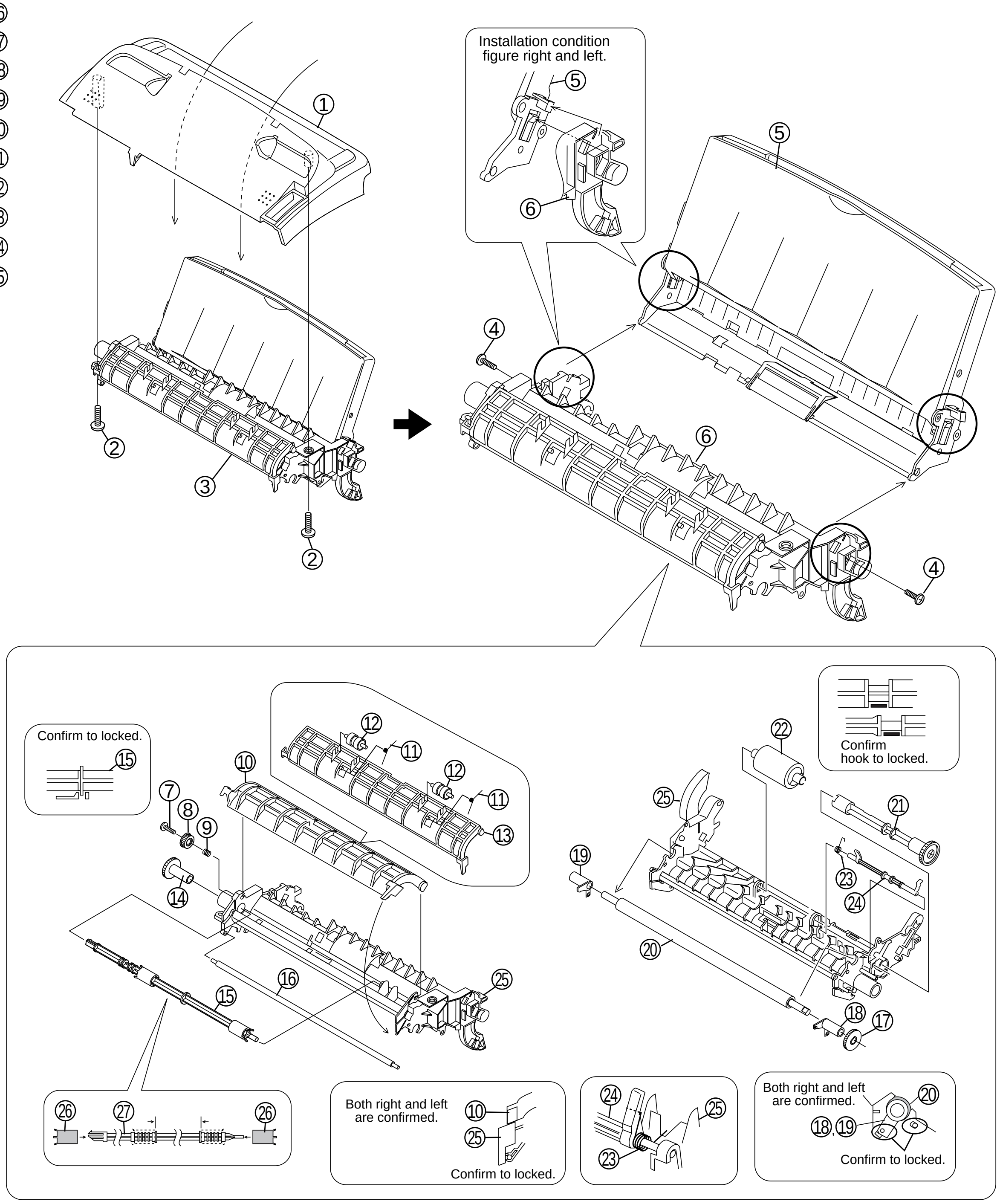


Fig. 8

9 Top cover and RP hopper

Parts list (Fig. 9)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Release knob	1	10	Rotation plate	1
2	Screw	1	11	RP pad	1
3	Pinion gear	1	12	C-spring	1
4	Hopper spring	1	13	Separate plate	1
5	Hopper guide, right	1	14	Separate plate sheet	1
6	Hopper guide, left	1	15	Separate spring	1
7	TC sheet	1	16	A4 paper guide (UX-485LU only)	1
8	Top cover	1			
9	RP release plate	1	17	RP hopper	1

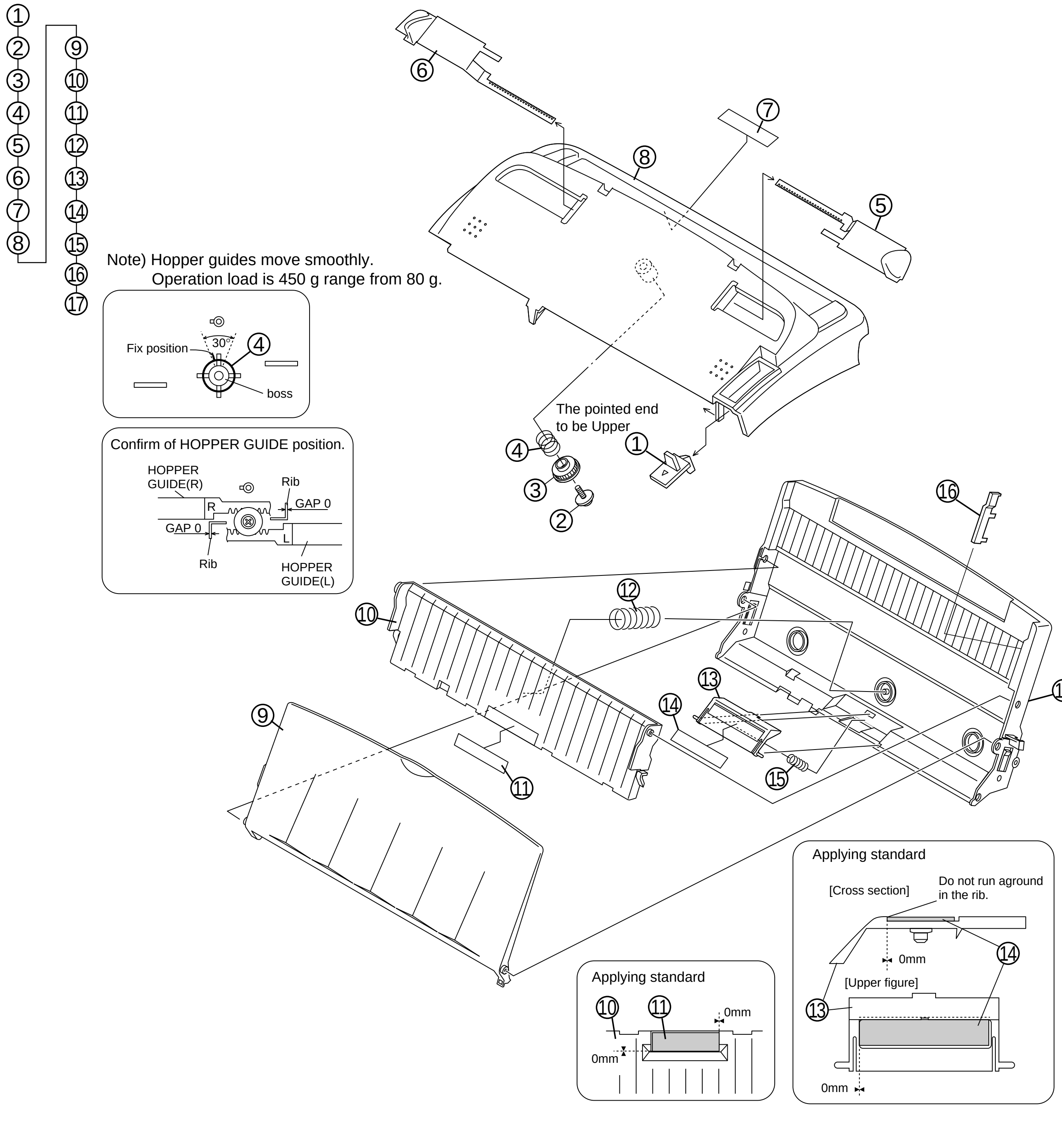
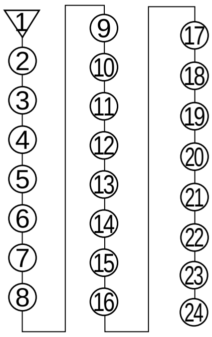


Fig. 9

10 Thermal head

Parts list (Fig. 10)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	13	Head spring C	2
2	Screw (3×10)	1	14	Head spring E	2
3	Head cover	1	15	Head spring F	1
4	Screw (3×10)	2	16	Head cushion	2
5	Head earth cable	1	17	Head frame	1
6	Head unit	1	18	Static brush	1
7	Film sensor lever spring	1	19	Head cable	1
8	Film sensor lever	1	20	Screw (3×6)	1
9	Screw (3×10)	2	21	Head guide, right	1
10	Panel lock lever spring	2	22	Screw (3×6)	1
11	Head spring D	2	23	Head guide, left	1
12	Thermal head ass'y	1	24	Thermal head	1



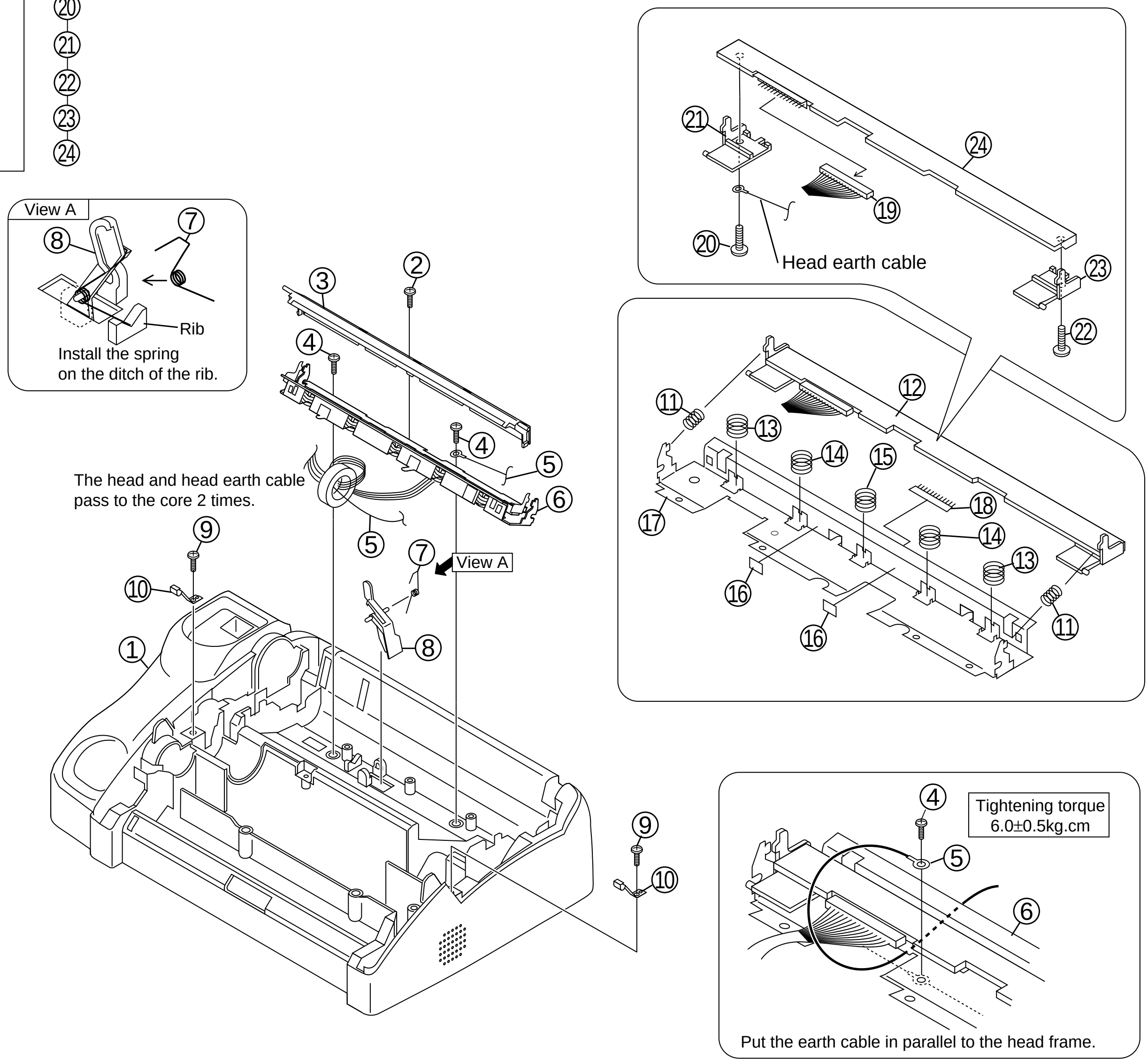


Fig. 10

11	**Wire treatment**

Parts list (Fig. 11)

No.	Part name	Q'ty
1	Screw (3×10)	1
2	Screw (4×6)	1
3	Core (F2125)	1
4	Screw (3×6)	1
5	Screw (3×6)	1

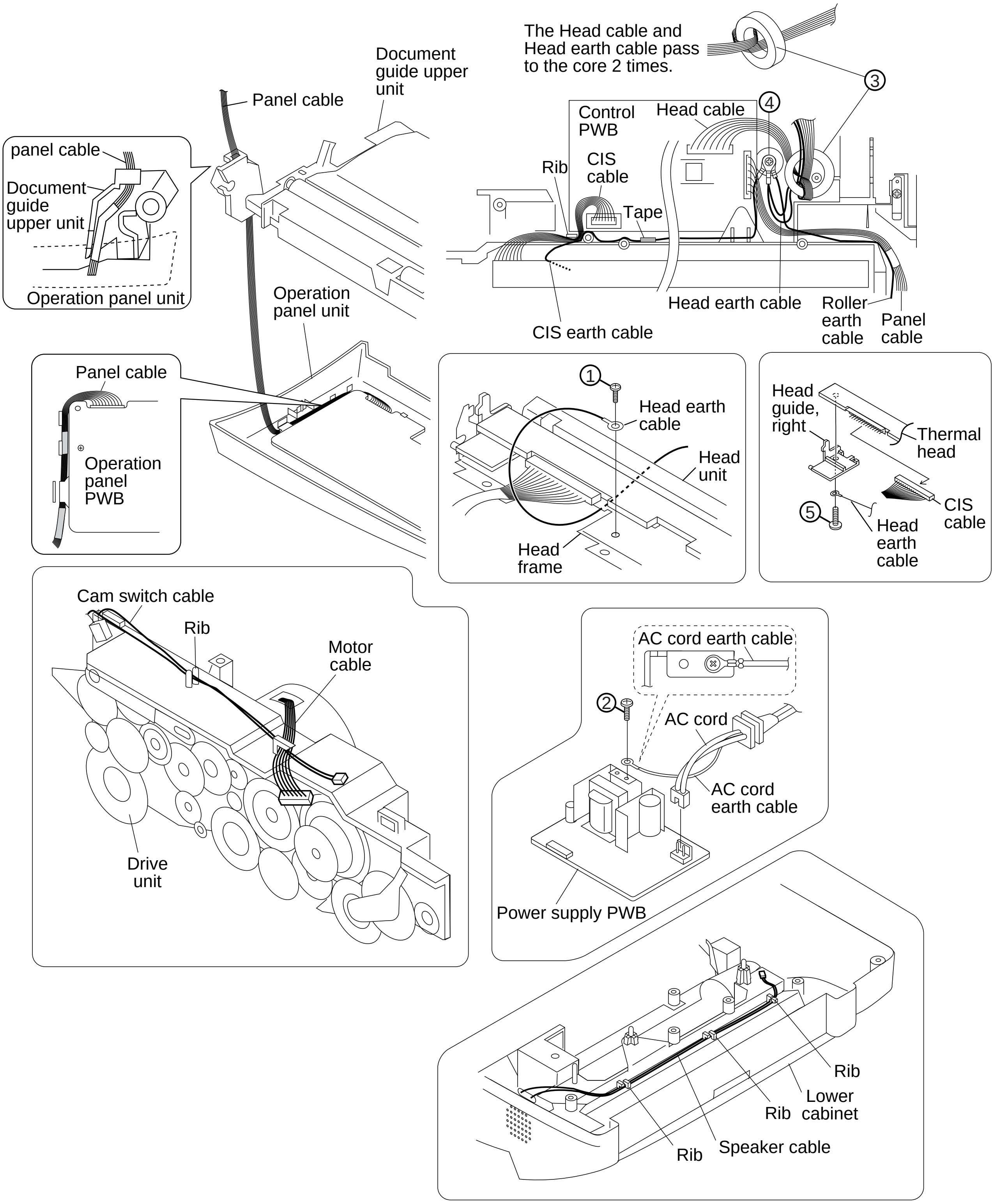
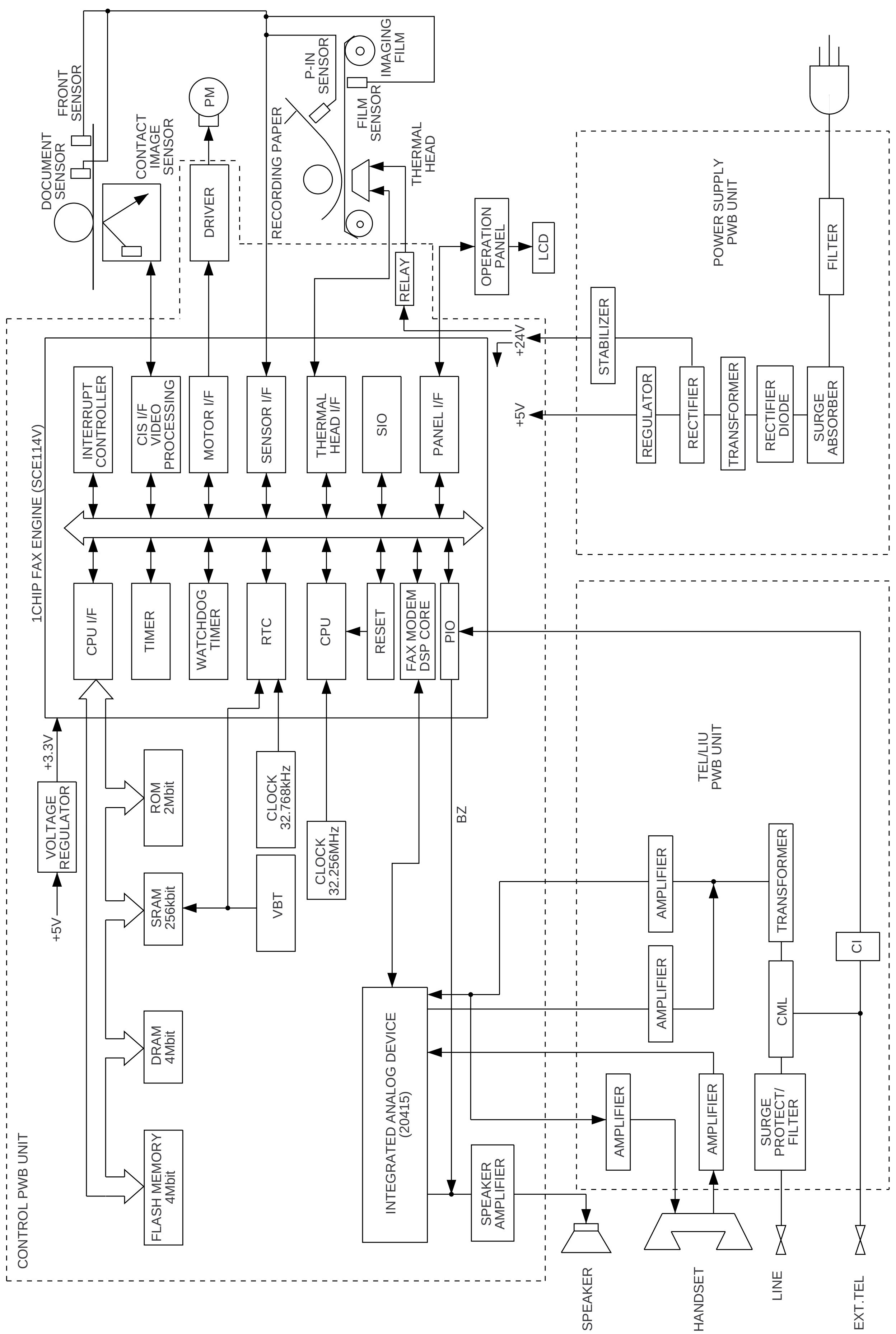


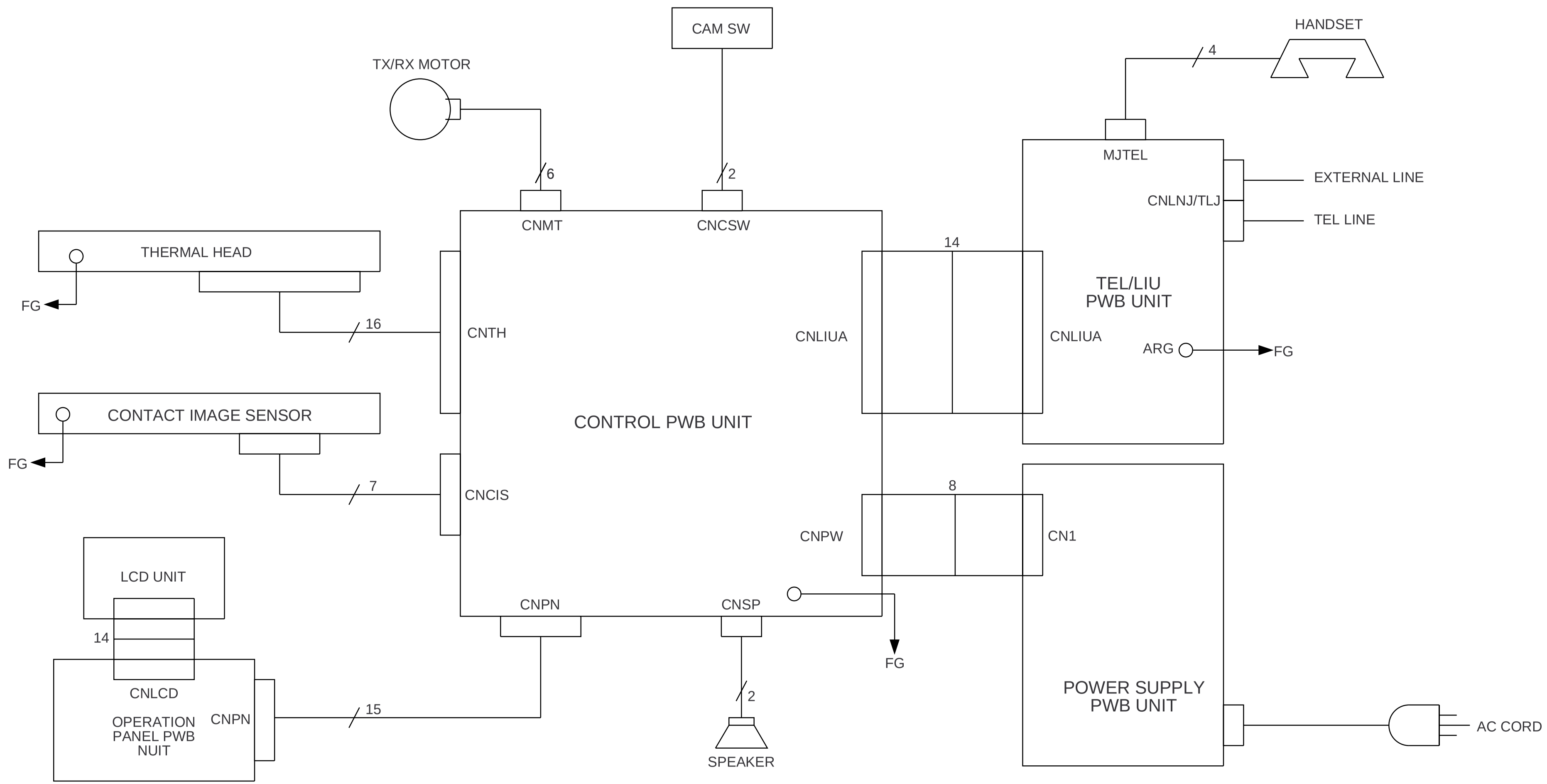
Fig. 11

CHAPTER 4. DIAGRAMS

[1] Block diagram



[2] Wiring diagram



[3] Point-to-point diagram

TX/RX MOTOR ↔ CONTROL PWB (CNMT)

TX/RX MOTOR	Pin	CNMT Pin	CNMT
$\overline{\text{TPBD}}$	1	1	$\overline{\text{TPBD}}$
$\overline{\text{TPAD}}$	2	2	$\overline{\text{TPAD}}$
TPBD	3	3	TPBD
TPAD	4	4	TPAD
VMT	5	5	VMT
VMT	6	6	VMT

THERMAL HEAD ↔ CONTROL PWB (CNTH)

THERMAL HEAD	Pin	CNTH Pin	CNTH
VTH	1	1	VTH
VTH	2	2	VTH
$\overline{\text{STRB1}}$	3	3	$\overline{\text{STRB1}}$
$\overline{\text{STRB2}}$	4	4	$\overline{\text{STRB2}}$
THI	5	5	THI
N.C.	6	6	N.C.
THG	7	7	THG
THG	8	8	THG
THG	9	9	THG
THVDD	10	10	THVDD
$\overline{\text{STRB3}}$	11	11	$\overline{\text{STRB3}}$
$\overline{\text{STRB4}}$	12	12	$\overline{\text{STRB4}}$
$\overline{\text{LATCH}}$	13	13	$\overline{\text{LATCH}}$
PCLK	14	14	PCLK
DATA	15	15	DATA
VTH	16	16	VTH

OPERATION PANEL PWB (CNPN) ↔ CONTROL PWB (CNPN)

CNPN	Pin	CNPN Pin	CNPN
KEN4A	1	1	KEN4A
KEN3A	2	2	KEN3A
KEN2A	3	3	KEN2A
KEN1A	4	4	KEN1A
+3.3V	5	5	+3.3V
DG	6	6	DG
+5VPN	7	7	+5VPN
$\overline{\text{ORGSNS}}$	8	8	$\overline{\text{ORGSNS}}$
$\overline{\text{FRSNS}}$	9	9	$\overline{\text{FRSNS}}$
SEN3	10	10	SEN3
SEN2	11	11	SEN2
SEN1	12	12	SEN1
SEN0	13	13	SEN0
E	14	14	E
SEN4	15	15	SEN4

CIS ↔ CONTROL PWB (CNCIS)

CIS	Pin	CNCIS Pin	CNCIS
VO	1	1	VO
VG	2	2	VG
CISVDD	3	3	CISVDD
øT	4	4	øT
CISCLK	5	5	CISCLK
GLED	6	6	GLED
+24V	7	7	+24V

CONTROL PWB (CNLIUA) ↔ TEL/LIU PWB (CNLIUA)

CNLIUA	Pin	CNLIUA Pin	CNLIUA
TELOUT	1	1	TELOUT
TELMUTE	2	2	TELMUTE
TELIN	3	3	TELIN
$\overline{\text{CI}}$	4	4	$\overline{\text{CI}}$
HS	5	5	HS
PE	6	6	PE
PIN	7	7	PIN
$\overline{\text{RHS}}$	8	8	$\overline{\text{RHS}}$
RXIN	9	9	RXIN
TXOUT	10	10	TXOUT
CML	11	11	CML
+5V	12	12	+5V
DG	13	13	DG
+24VA	14	14	+24V

CONTROL PWB (CNPW) ↔ POWER SUPPLY PWB (CN1)

CNPW	Pin	CN1 Pin	CN1
MG	1	1	MG
MG	2	2	MG
+24V	3	3	+24V
+24V	4	4	+24V
+24V	5	5	+24V
DG	6	6	DG
+5V	7	7	+5V
DG	8	8	DG

CONTROL PWB (CNCSW) ↔ CAM SWITCH

CNCSW	Pin	Pin	CAM SWITCH
$\overline{\text{CSW}}$	1	1	$\overline{\text{CSW}}$
DG	2	2	DG

CONTROL PWB (CNSP) ↔ SPEAKER

CNSP	Pin	Pin	SPEAKER
SP+	1	1	SP+
SP-	2	2	SP-

CHAPTER 5. CIRCUIT DESCRIPTION

[1] Circuit description

1. General description

The compact design of the control PWB is obtained by using CONEXANT fax engine in the main control section and high density printing of surface mounting parts. Each PWB is independent according to its function as shown in Fig. 1.

2. PWB configuration

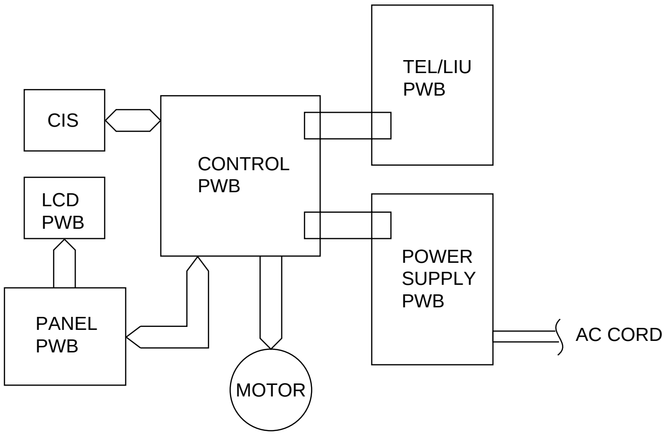


Fig. 1

1) Control PWB

The control PWB controls peripheral PWBs, mechanical parts, transmission, and performs overall control of the unit.
This machine employs a 1-chip modem (SCE114V) which is installed on the control PWB.

2) TEL/LIU PWB

This PWB controls connection of the telephone line to the unit.

3) Power supply PWB

This PWB provides voltages of +5V and +24V to the other PWBs.

4) Panel PWB

The panel PWB allows input of the operation keys.

5) LCD PWB

This PWB controls the LCD display.

3. Operational description

Operational descriptions are given below:

- Transmission operation

  When a document is loaded in standby mode, the state of the document sensor is sensed via the 1 chip fax engine (SCE114V). If the sensor signal was on, the motor is started to bring the document into the standby position. With depression of the START key in the off-hook state, transmission takes place.
  Then, the procedure is sent out from the modem and the motor is rotated to move the document down to the scan line. In the scan processor, the signal scanned by the CIS is sent to the internal image processor and the AD converter to convert the analog signal into binary data. This binary data is transferred from the scan processor to the image buffer within the RAM and encoded and stored in the transmit buffer of the RAM. The data is then converted from parallel to serial form by the modem where the serial data is modulated and sent onto the line.

- Receive operation

  There are two ways of starting reception, manual and automatic.
  Depression of the START key in the off-hook mode in the case of manual receive mode, or CI signal detection by the LIU in the automatic receive mode.

  First, the SCE114V controls the procedure signals from the modem to be ready to receive data. When the program goes into phase C, the serial data from the modem is converted to parallel form in the modem interface of the 1 chip fax engine (SCE114V) which is stored in the receive buffer of the RAM. The data in the receive buffer is decoded software-wise to reproduce it as binary image data in the image buffer. The data is DMA transferred to the recording processor within the SCE114V which is then converted from parallel to serial form to be sent to the thermal head. The data is printed line by line by the SCE114V which is assigned to control the motor rotation and strobe signal.

- Copy operation

  To make a copy on this facsimile, the COPY key is pressed when the machine is in stand-by with a document on the document table and the telephone set is in the on-hook state.

  First, depression of the COPY key advances the document to the scan line. Similar to the transmitting operation, the image signal from the CIS is converted to a binary signal in the DMA mode via the 1 chip fax engine (SCE114V) which is then sent to the image buffer of the RAM. Next, the data is transferred to the recording processor in the DMA mode to send the image data to the thermal head which is printed line by line. The copying takes place as the operation is repeated.

[2] Circuit description of control PWB

1. General description

Fig. 2 shows the functional blocks of the control PWB, which is composed of 5 blocks.

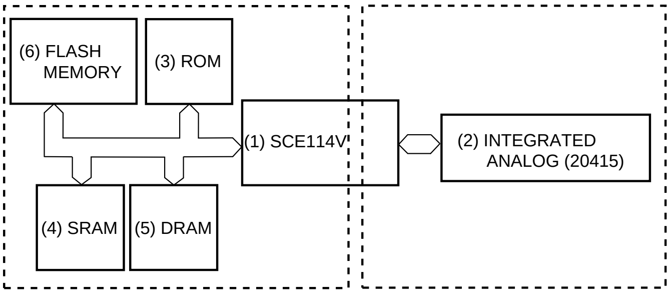


Fig. 2 Control PWB functional block diagram

2. Description of each block

(1) Main control block

The main control block is composed of CONEXANT 1 chip fax engine (SCE114V), ROM (2Mbit), SRAM (256kbit), DRAM (4Mbit) and Integrated Analog (20415).
Devices are connected to the bus to control the whole unit.

1) SCE114V (IC10) : pin-176 QFP (FAX CONTROLLER)

2) 20415 (IC11) : pin-32 QFP (INTEGRATED ANALOG)

The FAX ENGINE Integrated Facsimile Controllers.

SCE114V, contains an internal 8 bit microprocessor with an external 2 Mbyte address space and dedicated circuitry optimized for facsimile image processing and facsimile machine control and monitoring.

3) 27L2000 (IC7): pin-32 DIP (ROM)

ROM of 2Mbit equipped with software for the main CPU.

4) W24L257S-70LL (IC2): pin-28 SOP (SRAM)

Line memory for the main CPU system RAM area and coding/decoding process. Used as the transmission buffer.

Memory of recorded data such as daily report and auto dials. When the power is turned off, this memory is backed up by the lithium battery.

5) MSM51V4800E (IC3): pin-28 SOJ (DRAM)

Image memory for recording process.

- Memory for open LCR function. (UX-465 only)
- Memory for recording pixel data without paper.

6) K9F4008W0A (IC6): pin-44 TSOP (FLASH MEMORY)

A 512K × 8 bit NAND FLASH MEMORY to store the voice and image data when using memory functions.

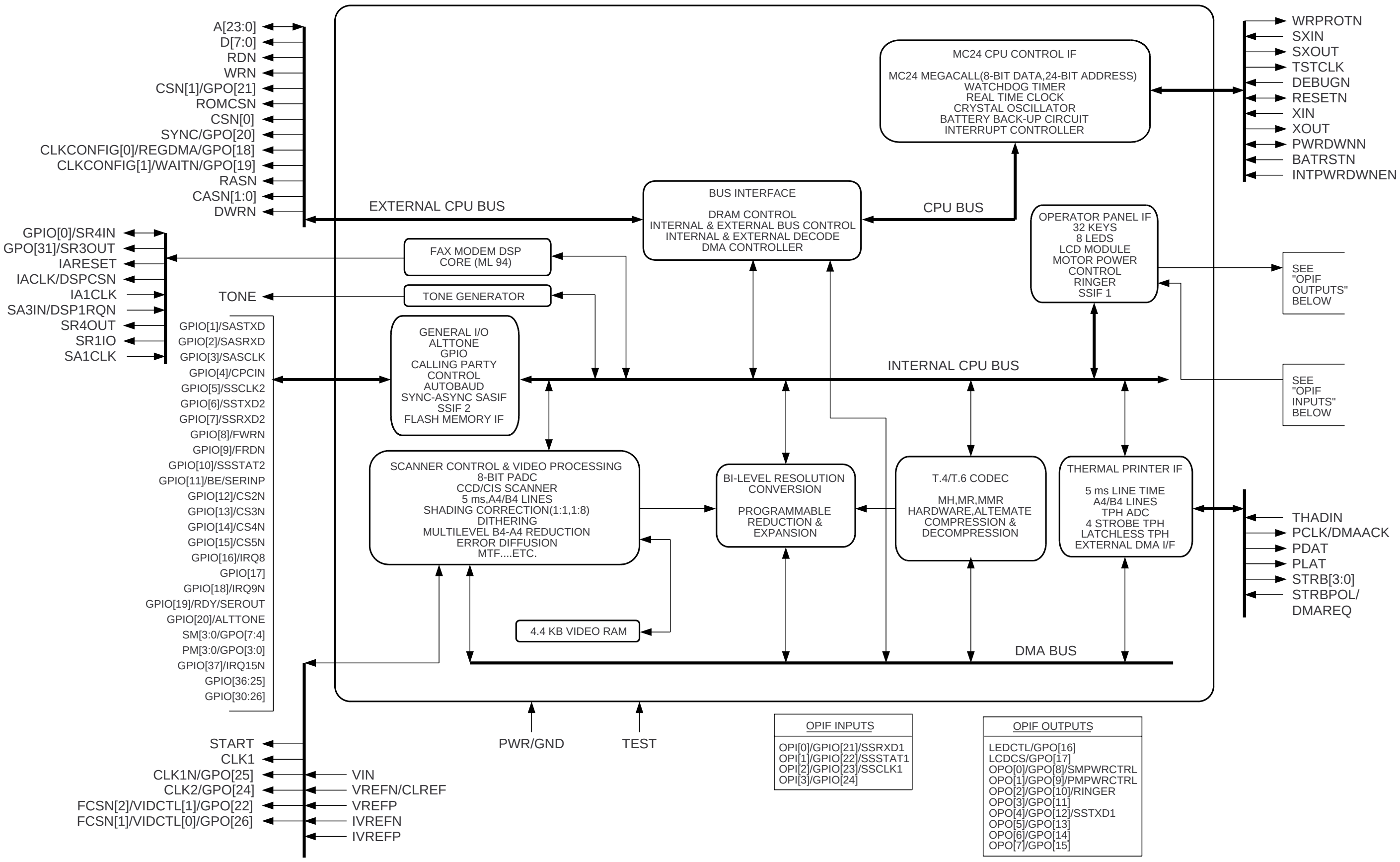


Fig. 3

SCE114V (IC10) Terminal descriptions

Pin No.	Pin List	I/O	Input Type	Output Type	Pin Description
1	VSS	–	–	–	Digital ground.
2	D[3]	I/O	Tu	13Xs	CPU data bus.
3	D[2]	I/O	Tu	13Xs	CPU data bus.
4	D[1]	I/O	Tu	13Xs	CPU data bus.
5	D[0]	I/O	Tu	13Xs	CPU data bus.
6	A[23]/EYEXY	I/O	Tu	13Xs	CPU address bus.
7	A[22]/EYESYNC	I/O	Tu	13Xs	CPU address bus.
8	A[21]/EYECLK	I/O	Tu	13Xs	CPU address bus.
9	A[20]	I/O	Tu	13Xs	CPU address bus.
10	A[19]	I/O	Tu	13Xs	CPU address bus.
11	A[18]	I/O	Tu	13Xs	CPU address bus.
12	VDD	–	–	–	Digital power.
13	A[17]	I/O	Tu	13Xs	CPU address bus.
14	A[16]	I/O	Tu	13Xs	CPU address bus.
15	A[15]	I/O	Tu	13Xs	CPU address bus.
16	A[14]	I/O	Tu	13Xs	CPU address bus.
17	VSS	–	–	–	Digital ground.
18	A[13]	I/O	Tu	13Xs	CPU address bus.
19	A[12]	I/O	Tu	13Xs	CPU address bus.
20	A[11]	I/O	Tu	13Xs	CPU address bus.
21	A[10]	I/O	Tu	13Xs	CPU address bus.
22	A[9]	I/O	Tu	13Xs	CPU address bus.
23	A[8]	I/O	Tu	13Xs	CPU address bus.
24	A[7]	I/O	Tu	13Xs	CPU address bus.
25	A[6]	I/O	Tu	13Xs	CPU address bus.
26	A[5]	I/O	Tu	13Xs	CPU address bus.
27	A[4]	I/O	Tu	13Xs	CPU address bus.
28	VDD	–	–	–	Digital power.
29	A[3]	I/O	Tu	13Xs	CPU address bus.
30	A[2]	I/O	Tu	13Xs	CPU address bus.
31	A[1]	I/O	Tu	13Xs	CPU address bus.
32	A[0]	I/O	Tu	13Xs	CPU address bus.
33	GPIO[20]/ALTTONE	I/O	Hu	13Xs	GPIO[20] or ALTTONE.
34	NC	–	–	–	No connection.
35	NC	–	–	–	No connection.
36	NC	–	–	–	No connection.
37	NC	–	–	–	No connection.
38	NC	–	–	–	No connection.
39	GPIO[19]/RDY/SEROUT	I/O	Hu	13Xs	GPIO[19], bus ready or serial port data output for autobaud detection.
40	GPIO[11]/BE/SERINP	I/O	Hu	13Xs	GPIO[11], bus enable or serial port data input for autobaud detection.
41	VSS	–	–	–	Digital ground.
42	PCLK/DMAACK	O	–	3XC	Thermal Print Head (TPH) clock or ext. DMA acknowledge.
43	PDAT	O	–	2XC	Serial printing data (to TPH).
44	PLAT	O	–	3XC	TPH data latch.
45	STRB[3]	O	–	1XC	Strobe signal for TPH.
46	STRB[2]	O	–	1XC	Strobe signal for TPH.
47	STRB[1]	O	–	1XC	Strobe signal for TPH.
48	STRB[0]	O	–	1XC	Strobe signal for TPH.
49	STRBPOL/DMAREQ	I	H	–	Sets strobe polarity active high/low or ext. DMA request.
50	VDD	–	–	–	Digital power.
51	GPIO[17]	I/O	Hu	13Xs	GPIO[17].
52	GPIO[16]/IRQ[8]	I/O	Hu	13Xs	GPIO[16] or ext. interrupt with priority 8.
53	GPIO[15]/CS[5]n	I/O	Hu	13Xs	GPIO[15] or I/O chip select 5.
54	GPIO[14]/CS[4]n	I/O	Hu	13Xs	GPIO[14] or I/O chip select 4.
55	GPIO[13]/CS[3]n	I/O	Hu	13Xs	GPIO[13] or I/O chip select 3.
56	GPIO[12]/CS[2]n	I/O	Hu	13Xs	GPIO[12] or I/O chip select 2.
57	GPIO[4]/CPCIN	I/O	Hu	13Xs	GPIO[4] or Call Party Control input.
58	VSS	–	–	–	Digital ground.
59	LEDCTL/GPO[16]	O	–	4XC	Indicates the OPO[7:0] outputs are for LEDs or GPO[16].
60	NC	–	–	–	No connection.
61	LEDCS/GPO[17]	O	–	1XC	LCD Chip select or GP0[17].
62	GPIO[7]/SSRXD2	I/O	Hu	13Xs	GPIO[7] or SSIF2 receive data.
63	GPIO[6]/SSTXD2	I/O	Hu	13Xs	GPIO[6] or SSIF2 transmit data.

SCE114V (IC10) Terminal descriptions

Pin No.	Pin List	I/O	Input Type	Output Type	Pin Description
64	GPIO[5]/SSCLK2	I/O	Hu	13Xs	GPIO[5] or SSIF2 clock.
65	GPIO[10]/SSSTAT2	I/O	Hu	13Xs	GPIO[10] or SSIF2 status.
66	VDRAM	–	–	–	DRAM battery power.
67	RASn	O	–	13Xs	(Batt. Pwr.) DRAM row address select.
68	CAS[1]n	O	–	13Xs	(Batt. Pwr.) DRAM column address select.
69	CAS[0]n	O	–	13Xs	(Batt. Pwr.) DRAM column address select.
70	DWRn	O	–	13Xs	(Batt. Pwr.) DRAM write.
71	VBAT	–	–	–	Battery power.
72	XIN	I	Osc1	–	(Batt. Pwr.) 32.768KHz Crystal Oscillator input.
73	XOUT	O	–	Osc1	(Batt. Pwr.) 32.768KHz Crystal Oscillator output.
74	WRPROTn	O	–	1XC	(Batt. Pwr.) Write protect during loss of VDD power.
75	CS0n	O	–	13Xs	(Battery Powered) SRAM Chip select.
76	TEST[1]	I	Hd	–	(Batt. Pwr.) Test mode.
77	TEST[0]	I	Hd	–	(Batt. Pwr.) Test mode.
78	BATRSTn	I	H	–	(Batt. Pwr.) Battery power reset input.
79	INTPWRDWNEn	I	H	–	(Batt. Pwr.) Internal power down select signal.
80	PWRDWNn	I/O	H	13Xs	(Batt. Pwr.) Indicates a prime power loss from ext./internal source (mode dependent).
81	NC	I	Analog	–	No Connection.
82	ADGA	–	VADG	–	A/D analog ground.
83	VREFn/CLREF	I	VR-	–	Negative reference voltage for Video A/D.
84	VIN	I	VA	–	Analog Video A/D input.
85	ADGA	–	VADG	–	A/D analog ground.
86	ADVA	–	VADV	–	A/D analog power.
87	ADXG	–	VXG	–	A/D internal ground.
88	VREFp	I	VR	–	Positive reference voltage for Video A/D.
89	IVREFn	I	VR-	–	Internal negative reference voltage for A/D.
90	IVREFp	I	VR+	–	Internal positive reference voltage for A/D.
91	VDD	–	–	–	Digital power.
92	THADI	I	Analog	–	Analog Thermal A/D input.
93	OPO[7]/GPO[15]	O	–	13Xs	Keyboard LED strobe 7 or GPO[15].
94	OPO[6]/GPO[14]	O	–	13Xs	Keyboard LED strobe 6 or GPO[14].
95	OPO[5]/GPO[13]	O	–	13Xs	Keyboard LED strobe 5 or GPO[13].
96	OPO[4]/GPO[12]/SSTXD1	O	–	13Xs	Keyboard LED strobe 4 or GPO[12] or transmit data for SSIF1.
97	OPO[3]/GPO[11]	O	–	13Xs	Keyboard LED strobe 3 or GPO[11].
98	OPO[2]/GPO[10]/RINGER	OZ	–	13Xs	Keyboard LED strobe 2 or GPO[10] or ringer.
99	OPO[1]/GPO[9]/PMPWRCTRL	O	–	13Xs	Keyboard LED strobe 1 or GPO[9] or Printer motor power control.
100	OPO[0]/GPO[8]SMPWRCTRL	O	–	13Xs	Keyboard LED strobe 0 or GPO[8] or Stepper motor power control.
101	OPI[3]/GPIO[24]	I/O	Hu	13Xs	Keyboard return 3 or GPIO[24].
102	OPI[2]/GPIO[23]/SSCLK1	I/O	Hu	13Xs	Keyboard return 2 or GPIO[23] or SSIF1 clock.
103	OPI[1]/GPIO[22]/SSSTAT1	I/O	Hu	13Xs	Keyboard return 1 or GPIO[22] or SSIF1 status.
104	OPI[0]/GPIO[21]/SSRXD1	I/O	Hu	13Xs	Keyboard return 0 or GPIO[21] or SSIF1 receive data.
105	RESETn	I/O	Hu	2XC	Chip reset.
106	VSS	–	–	–	Digital ground.
107	GPIO[18]/IRQ[9]n	I/O	Hu	13Xs	GPIO[18] or ext. interrupt priority 9.
108	GPIO[3]/SASCLK	I/O	Hu	13Xs	GPIO[3] or SASIF clock.
109	GPIO[2]/SASRXD	I/O	Hu	13Xs	GPIO[2] or SASIF receive data.
110	GPIO[1]/SASTXD	I/O	Hu	13Xs	GPIO[1] or SASIF transmit data.
111	GPIO[9]/FRDn	I/O	Hu	13Xs	GPIO[9] or flash read enable signal for NAND-type flash memory.
112	GPIO[8]/FWRn	I/O	Hu	13Xs	GPIO[8] or flash write enable signal for NAND-type flash memory.
113	FCSn[2]/VIDCTL[1]/GPO[22]	O	–	13Xs	Flash memory chip select 2 or video control signal 1 or GPO[22].
114	FCSn[1]/VIDCTL[0]/GPO[23]	O	–	13Xs	Flash memory chip select 1 or video control signal 1 or GPO[23].
115	CLK2/GPO[24]	O	–	13Xs	Scanner reset gate control (or clock for CIS scanner) or GPO[24].
116	CLK1n/GPO[25]	O	–	13Xs	Scanner clock-inverted or GPO[25].
117	CLK1	O	–	2XC	Scanner clock.
118	START	O	–	2XC	Scanner shift gate control.
119	VDD	–	–	–	Digital power.
120	TONE	O	–	Analog	Analog tone output.
121	VSS	–	–	–	Digital ground.
122	GPIO[25]/STROBEN	I/O	Hu	13Xs	GPIO[25] or P1284 input from host.
123	GPIO[26]/AUTOFDN	I/O	Hu	13Xs	GPIO[26] or P1284 input from host.
124	GPIO[27]/INITN	I/O	Hu	13Xs	GPIO[27] or P1284 input from host.
125	GPIO[28]/SLCTINN	I/O	Hu	13Xs	GPIO[28] or P1284 input from host.
126	GPIO[26]/ACKN	O	–	13Xs	GPIO[26] or P1284 returned status to host.

SCE114V (IC10) Terminal descriptions

Pin No.	Pin List	I/O	Input Type	Output Type	Pin Description
127	GPO[27]/BUSY	O	–	13Xs	GPO[27] or P1284 returned status to host.
128	GPO[28]/PERROR	O	–	13Xs	GPO[28] or P1284 returned status to host.
129	GPO[29]/SLCTOUT	O	–	13Xs	GPO[29] or P1284 returned status to host.
130	GPO[30]/FAULTN	O	–	13Xs	GPO[30] or P1284 returned status to host.
131	GPIO[29]/PIOD[0]	I/O	Hu	13Xs	GPO[29] or P1284 data or address driven by asic or host (mode dependent).
132	GPIO[30]/PIOD[1]	I/O	Hu	13Xs	GPO[30] or P1284 data or address driven by asic or host (mode dependent).
133	GPIO[31]/PIOD[2]	I/O	Hu	13Xs	GPO[31] or P1284 data or address driven by asic or host (mode dependent).
134	GPIO[32]/PIOD[3]	I/O	Hu	13Xs	GPO[32] or P1284 data or address driven by asic or host (mode dependent).
135	GPIO[33]/PIOD[4]	I/O	Hu	13Xs	GPO[33] or P1284 data or address driven by asic or host (mode dependent).
136	GPIO[34]/PIOD[5]	I/O	Hu	13Xs	GPO[34] or P1284 data or address driven by asic or host (mode dependent).
137	GPIO[35]/PIOD[6]	I/O	Hu	13Xs	GPO[35] or P1284 data or address driven by asic or host (mode dependent).
138	GPIO[36]/PIOD[7]	I/O	Hu	13Xs	GPO[36] or P1284 data or address driven by asic or host (mode dependent).
139	VDD	–	–	–	Digitai power.
140	GPIO[0]/SR4IN	I/O	Hu	13Xs	GPIO[0] or from secondary EXTIA SOUT to DSP.
141	GPO[31]/SR3OUT	O	–	13Xs	GPO[31] or a signal to the secondary ext. IA (SIN pin) from the DSP.
142	GPIO[37]/IRQ15n	I/O	Hu	13Xs	GPIO[37] or a signal from the ext. IA to a DSP status register.
143	IARESET	O	–	13Xs	A reset from the DSP to the ext. IA (POR pin).
144	IACLK/DSPCSn	O	–	13Xs	A signal from the DSP to the ext. IA (MCLK pin) or ext. modem chip select.
145	IA1CLK	I/O	H	13Xs	A signal from the ext. IA (ICLK pin) to the DSP.
146	SR3IN/DSPIRGn	I	H	13Xs	A signal from the primary ext. IA (SOUT pin) to the DSP or ext. modem interrupt input.
147	SR4OUT	O	–	13Xs	A signal to the primary ext. IA (SIN pin) from the DSP.
148	SR1IO	I/O	H	13Xs	A signal to the ext. IA (CTRL1 pin) from the DSP.
149	SA1CLK	I/O	H	13Xs	A signal from the ext. IA (FSYNC pin) to the DSP.
150	VSSPLL	–	–	–	Ground for PLL.
151	TSTCLK	O	–	13Xs	Test clock, used to synchronize ext. logic.
152	DEBUGn	I	Hu	–	External non-maskable input (NMI).
153	RDn	O	–	13Xs	Read strobe.
154	WRn	O	–	13Xs	Write strobe.
155	SYNC/GPO[20]	I/O	Hu	13Xs	Indicates a CPU op code fetch cycle or GPO[20].
156	ROMCSn	O	–	13Xs	ROM chip select.
157	CS1n/GPO[21]	O	–	13Xs	I/O chip select or GPO[21].
158	VSS	–	–	–	Digital ground.
159	SXIN	I	OSC0	–	32.256MHz crystal oscillator input.
160	SXOUT	O	–	OSC0	32.256MHz crystal oscillator output.
161	VDD	–	–	–	Digital power.
162	PM[3]/GPO[3]	O	–	13Xs	Programmable print motor control pin or GPO[3].
163	PM[2]/GPO[2]	O	–	13Xs	Programmable print motor control pin or GPO[2].
164	PM[1]/GPO[1]	O	–	13Xs	Programmable print motor control pin or GPO[1].
165	PM[0]/GPO[0]	O	–	13Xs	Programmable print motor control pin or GPO[0].
166	SM[3]/GPO[7]	O	–	13Xs	Programmable scan motor control pin or GPO[7].
167	SM[2]/GPO[6]	O	–	13Xs	Programmable scan motor control pin or GPO[6].
168	SM[1]/GPO[5]	O	–	13Xs	Programmable scan motor control pin or GPO[5].
169	SM[0]/GPO[4]	O	–	13Xs	Programmable scan motor control pin or GPO[4].
170	REGDMA/GPO[18]/CLKConfig[0]	O	–	13Xs	Register select cycle/dma cycle or GPO[18] and sxin clock divider config. during reset.
171	WAITn/GPO[19]/CLKConfig[1]	I/O	Hu	13Xs	Wait state/halt state indication or GPO[19] and sxin lock divider config. during reset.
172	VDDPLL	–	–	––	Power for PLL.
173	D[7]	I/O	Tu	13Xs	CPU data bus.
174	D[6]	I/O	Tu	13Xs	CPU data bus.
175	D[5]	I/O	Tu	13Xs	CPU data bus.
176	D[4]	I/O	Tu	13Xs	CPU data bus.

(2) Panel control block

The following controls are performed by the SCE114V.

- Operation panel key scanning
- Operation panel LCD display

(3) Mechanism/recording control block

- Recording control block diagram (1)

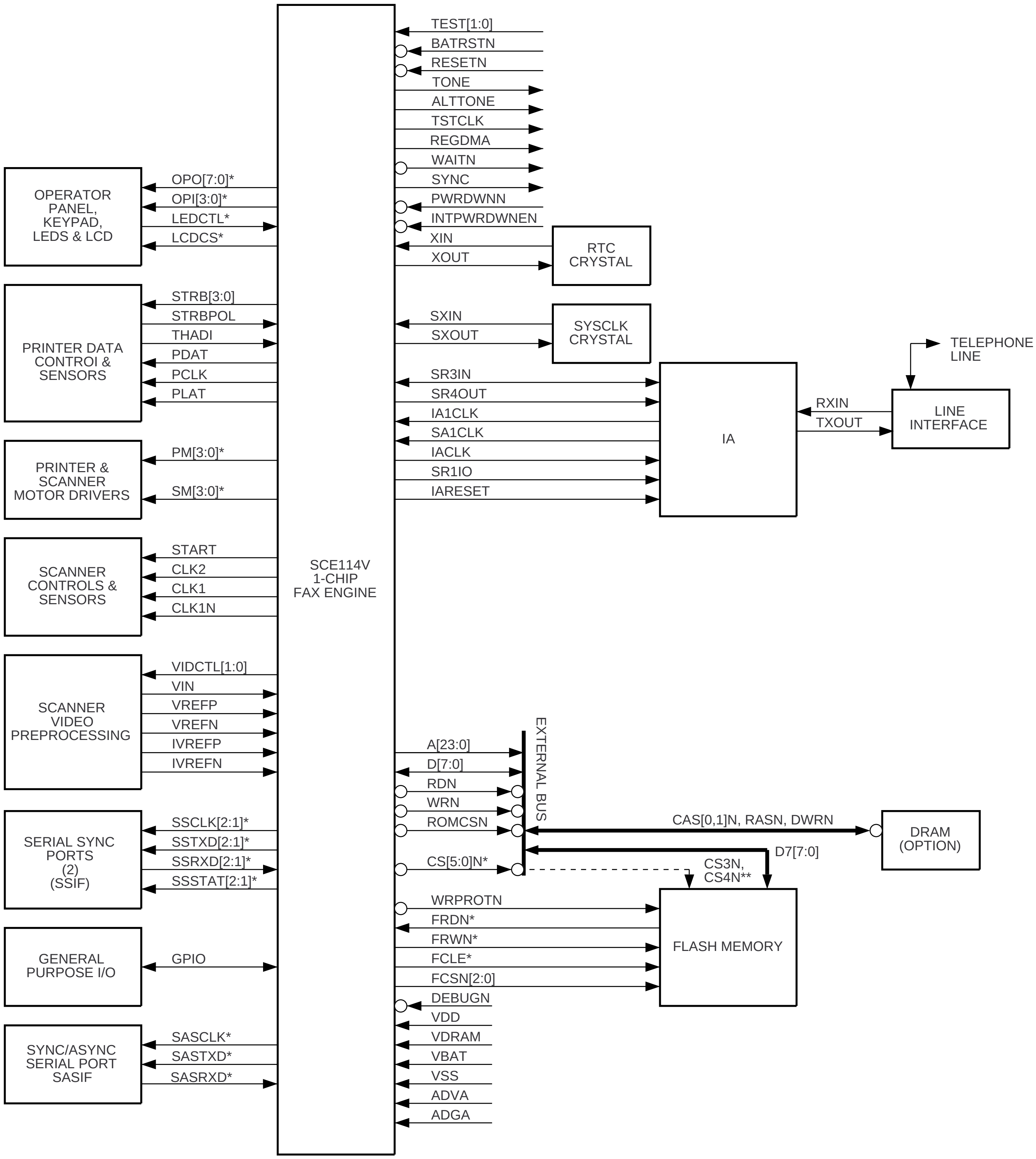


Fig. 4

(4) Modem (SCE114V/20415) block

The modem block consists of two parts.
One is SCE114V Fax Modem DSP Core and the other is 20415 Integrated Analog Device.

1. FACSIMILE MODEM

The modem can operate at 14400, 12000, 9600, 7200, 4800, 2400, or 300 bps, and can perform HDLC framing per T.30 at all rates. A programmable DTMF detector, three programmable tone detectors, V.21 Channel 2 FSK 7E flag detector, Caller ID demodulator and ring detector are provided.

2. VOICE AND AUDIO CODECS

The voice coder/decoder (codec) compresses voice at an average rate of 2.9 kbps which provides 24 minutes of stored voice messages in 4 Mbits of memory. This voice codec allows the host controller to efficiently store and playback digital incoming messages (ICMs), outgoing messages (OGMs).

The ADPCM audio codec compresses audio signals (music/voice) at 32 kbps or 24 kbps and the PCM audio codec records audio signals at 128 kbps or 64 kbps for highest fidelity coding and reproduction.

Selectable error correction coding allows storage in audio grade RAMs (ARAMs). Echo cancellation techniques employed during playback allow DTMF tone and Type II Caller ID CAS detection during voice/audio codec operation to support user selectable features. The coder can record messages from the PIA or SIA. The decoder can playback messages to the PIA or both the PIA and SIA. Dual/signal tone transmission is available when the decoder is disabled.

3. V.23 FULL-DUPLEX MODEM AND CALLER ID

Both full-duplex transmit and receive (with asymmetric 1200/75 bps connection) and half-duplex (1200 bps) asynchronous V.23 are supported, as will as both serial and parallel interfaces to the modem. The V.23 algorithm includes an optional, programmable. receive compromise equalizer which is active in both V.23 and Caller ID (V.23 Receive only) modes.

Common applications for V.23 include France's Minitel and Japan's Lowest Cost Routing.

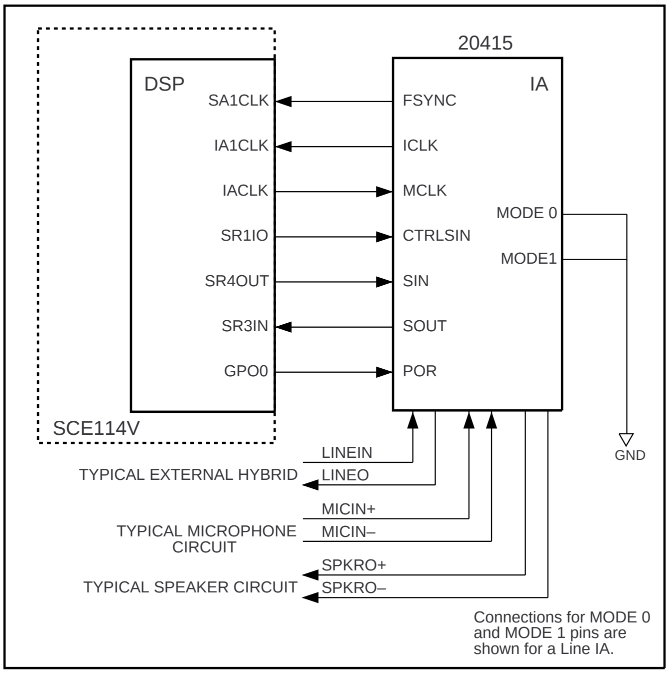


Fig. 5

4. FEATURES

- Group 3 facsimile transmission/reception
  - ITU-T V.17 and V.33
  - ITU-T V.29, V.27 ter, T.30, V.21 Channel 2, T.4
  - ITU-T V.17 and V.27 ter short train
  - HDLC framing at all speeds
  - Receive dynamic range: 0 dBm to -43 dBm
  - Automatic adaptive equalization
  - Fixed and programmable digital compromise equalization
  - DTMF detect and tone detect
  - ITU-T V.21 Channel 2 FSK 7E Flag Detect
  - Ring detector
  - Programmable transmits level
  - Programmable single/dual tone transmission
- Voice codec
  - 24 minutes of voice storage per 4 Mbit memory
  - Near toll quality voice recording and playback
  - Programmable AGCs
  - Programmable line/microphone input and line/speaker output filters
  - Error correction coding allows ARAM usage
  - DTMF detect, tone detect, and tone transmit
  - Type II Caller ID CAS detection
  - Pitch synchronized fast and slow playback
  - Near-end echo cancellation
- ADPCM Audio codec
  - High fidelity recording and playback of audio signals
  - 32 kbps and 24 kbps
  - Programmable AGCs
  - Programmable line/microphone input and line/speaker output filters
  - DTMF detect, tone detect, and tone transmit
  - Type II Caller ID CAS detection
  - Near-end echo cancellation
- PCM audio codec
  - 128 kbps and 64 kbps
  - DTMF detect and tone detect
  - Type II Caller ID CAS detection
  - Near-end echo cancellation
- V.23 and Type I Caller ID
  - Full-duplex modes:
    TX = 75 bps. RX = 1200 bps
    TX = 1200 bps. RX = 75 bps
  - Half-duplex mode:
    TX = RX = 1200 bps
  - Serial and parallel data modes
  - Programmable parallel data mode
  - 5, 6, 7, or 8 data bits
  - 1 or 2 Stop bits
  - Mark, Space, Even, or Odd Parity
  - Break function
  - Transmitter squelch
  - Compromise equalizer
- 3.3V/5V operation

[3] Circuit description of TEL/LIU PWB

(1) TEL/LIU block operational description

1) Block diagram

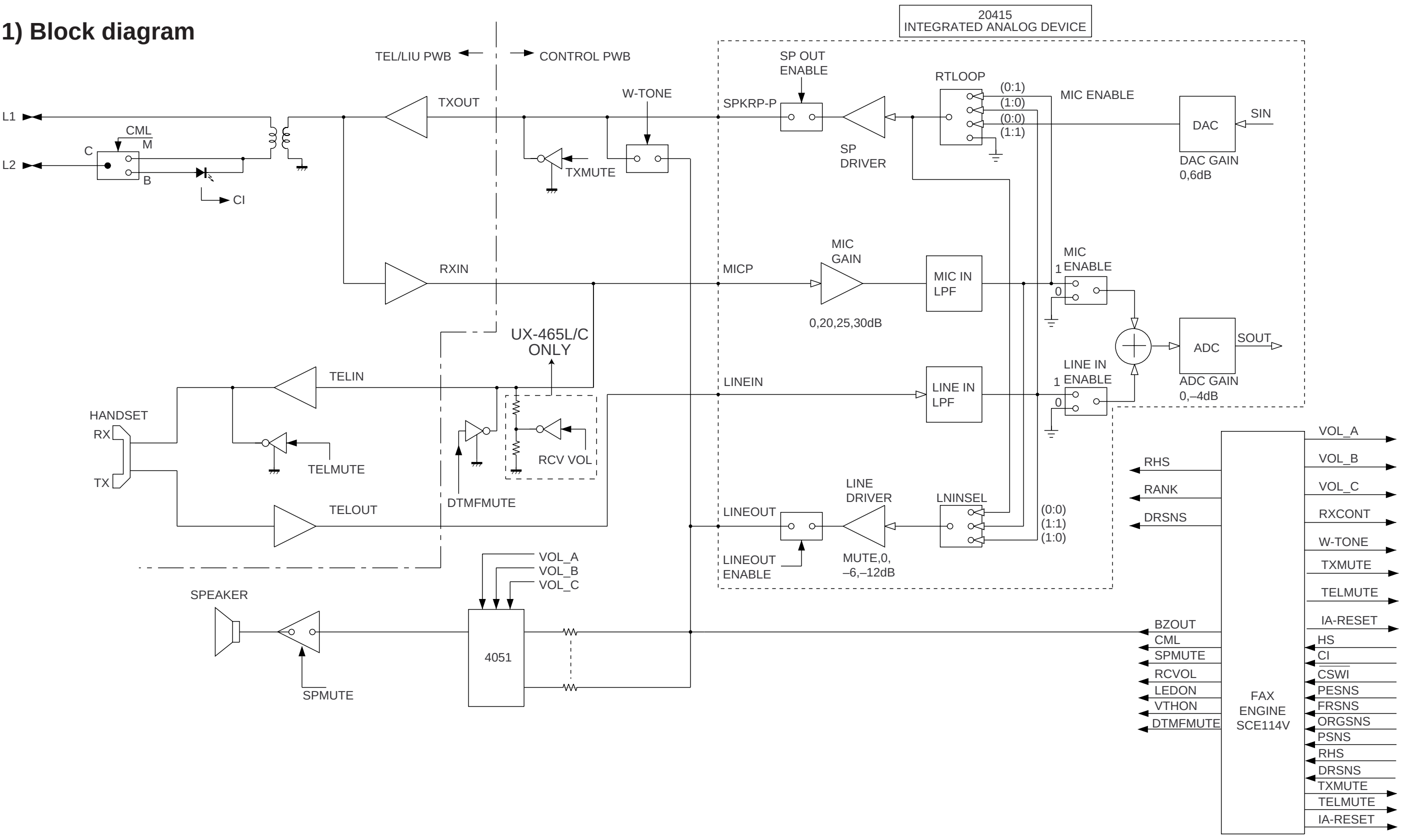


Fig. 6

2) Circuit description

The TEL/LIU PWB is composed of the following 7 blocks.

1. Speech circuit section
2. Dial transmission section
3. Speaker amplifier section
4. Ringer circuit section
5. Externally connected TEL OFF HOOK detection circuit
6. CI detection circuit
7. Signal/DTMF transmission level & receiving level

3) Block description

1. Speech circuit section

- The receiver volume is an electronic volume type, this model is switched in 2 steps.

2. Dial transmission section

- D.P. transmission: The CML relay is turned on and off for control in the DP calling system. (Refer to the attached sheet.)
- DTM transmission: It is formed in the modem, and is output.

3. Speaker amplifier section

- Ringer volume :It is controlled by the combination of the attenuator value of the LINE DRIVER in the modem and the ringer sending level sent from the modem.
- Speaker volume :It is controlled by the attenuator value of the LINE DRIVER in the modem.

4. Ringer circuit section

- The ringer sound is formed in the tone of modem when CI signal is detected. The amplifier circuit drives the speaker of the main body.

5. Externally connected TEL OFF HOOK detection circuit section

- The circuit current detection is turned on together with OFF HOOK of main body or OFF HOOK of externally connected TEL. ON of CML OFF ($\overline{HS}$=L) is judged as OFF HOOK of externally connected TEL.

6. CI detection circuit

- CI is detected by the photo coupler which is integrated in series in the primary side TEL circuit well proven in the existing unit.

7. Signal/DTMF transmission level & receiving level

- Signal transmission level setting: ATT -10 dB Circuit output: -12 dBm.
- DTMF transmission level setting: HF -3.5 dBm LF -5.0 dBm
  Thus, set the level.

4) Signal selection

The following signals are used to control the transmission line of TEL/FAX signal. For details, refer to the signal selector matrix table.

[Control signals from output port]

<table>
<tr><th>Signal Name</th><th>Description</th></tr>
<tr><td>CML
(The circuit is located in the TEL/LIU PWB.)</td><td><u>Line connecting relay and DP generating relay</u>
H: Line make
L: Line break</td></tr>
<tr><td>SP MUTE
(The circuit is located in the TEL/LIU PWB.)</td><td><u>Speaker tone mute control signal</u>
H: Muting (Power down mode)
L: Muting cancel (Normal operation)</td></tr>
<tr><td>TEL MUTE</td><td><u>Handset reception mute control signal</u>
H: Muting
L: Muting cancel</td></tr>
<tr><td>RCVOL
DTMFMUTE
(The circuit is located in the control PWB.)
(UX-465L/C ONLY)</td><td><u>Handset receiver volume control signal</u>
<table><tr><td>Volume</td><td>High</td><td>Middle</td><td>Low</td><td>DTMF sending</td></tr><tr><td>RCVOL</td><td>L</td><td>H</td><td>L</td><td>L</td></tr><tr><td>DTMFMUTE</td><td>L</td><td>L</td><td>H</td><td>H</td></tr></table>Note: The DTMF sending listed above is DTMF signal sending in the handset OFF-HOOK mode.</td></tr>
</table>

VOLUME SETTING

OUTPUT	VALUE	VOL A (GP02)	VOL B (GP03)	VOL C (GP04)	ON-HOOK Receiving	ICM/OGM MONITOR	ICM/OGM PLAY	RINGER	BUZZER	DTMF/DP
X 0	1K	0	0	0	—	HIGH	HIGH	HIGH	—	—
X 1	10K	1	0	0	HIGH	MID 1	MIDDLE1	—	—	—
X 2	39K	0	1	0	MID 1	MID 2	MIDDLE2	—	—	—
X 3	100K	1	1	0	MID 2	MID 3	MIDDLE3	—	—	—
X 4	200K	0	0	1	MID 3	LOW	LOW	MIDDLE	—	—
X 5	300K	1	0	1	—	—	—	—	—	FIXED
X 6	470K	0	1	1	LOW	—	—	—	FIXED	—
X 7	750K	1	1	1	—	—	—	LOW	—	—

[Signals for status recognition according to input signals]

Signal Name	Function
$\overline{RHS}$	H: The handset is in the on-hook state. L: The handset is in the off-hook state.
CI	Incoming call (CI) detection signal

[Other signals]

Signal Name	Function
TEL IN	Receiving signal from line or modem
TEL OUT	Transfer signal to line
SPOUT	Speaker output signal
TXOUT	Transmission (DTMF) analog signal output from modem
RXIN	Reception (DTMF, others) analog signal input into modem

NO	Signal Name (CNLIUA)	NO	Signal Name (CNLIUA)
1	TELOUT	8	$\overline{RHS}$
2	TELMUTE	9	RXIN
3	TELIN	10	TXOUT
4	$\overline{CI}$	11	CML
5	HS	12	+5V
6	PE	13	DG
7	PIN	14	+24V

(Example: TEL speaking)

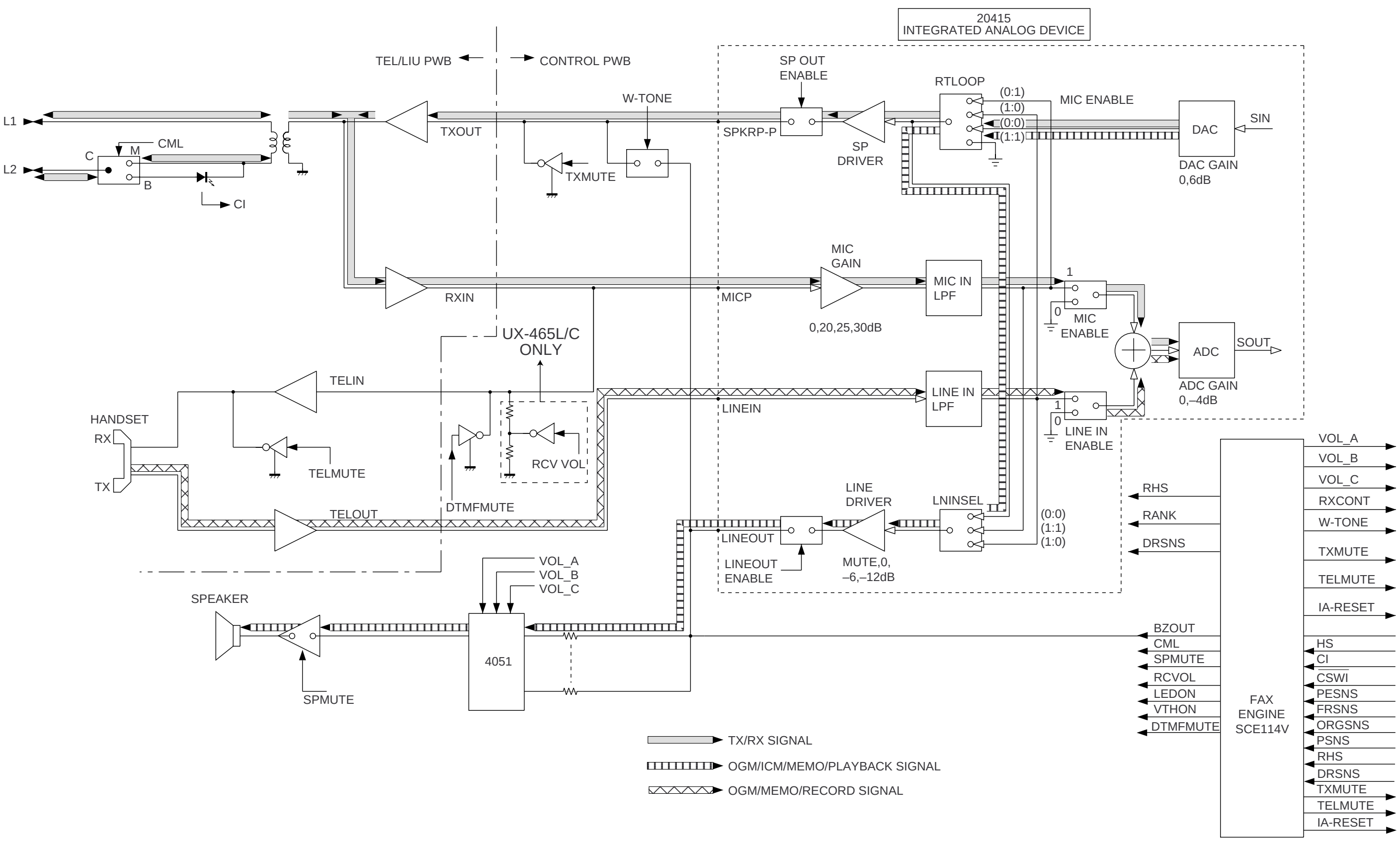


Fig. 7

[4] Circuit description of power supply PWB

1. Block diagram

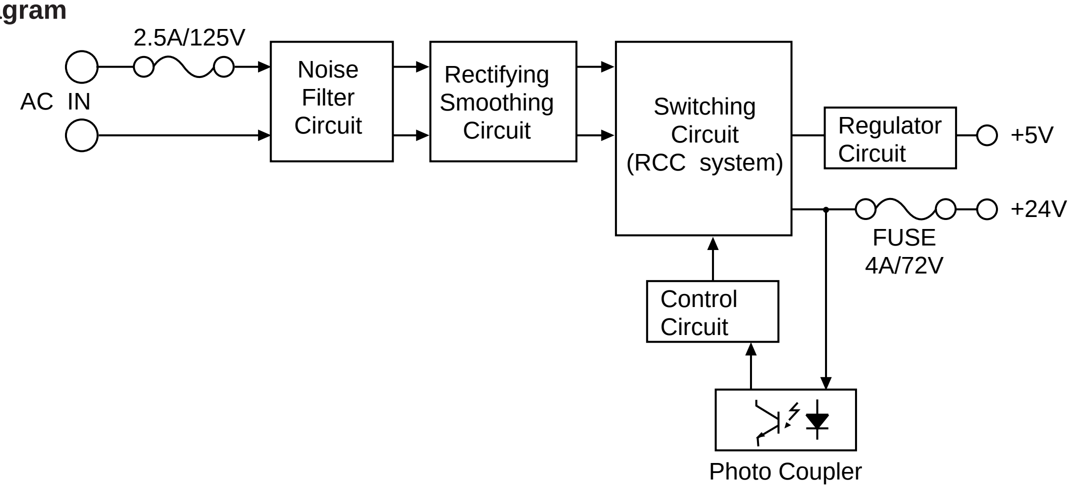


Fig. 8

2-1. Noise filter circuit

The input noise filter section is composed of L1 and C1, which reduces normal mode noise from the AC line and common mode noise to the AC line.

2-2. Rectifying/smoothing circuit

The AC input voltage is rectified by diode D1, 2, 3, 4 and smoothed by capacitor C2 to supply DC voltage to the switching circuit section.

2-3. Switching circuit

This circuit includes MOS FET Q1 and the gate drive circuit, and components around Q1.

In this circuit, the DC voltage supplied from the rectifying/smoothing section is converted into high frequency pulses by ON/OFF repetition of Q1.

2-4. Control circuit

This circuit controls output voltage of +24V by adjusting ON period of Q1, looking at signal from photo coupler PC1.

In this operation IC1 takes charge of important part.

The over current protection is performed by bringing Q1 to OFF state through detection of voltage of T1 subwiding.

The over voltage protection is performed by operating the over current protection circuit through detection of zener diode ZD4 and short-circuiting of load.

2-5. +5V circuit

DC voltage supplied by rectifying the output of transformer T1 with diode D8 is stabilized by 3-terminal regulator IC1.

[5] Circuit description of CIS unit

1. CIS

Cis is an image sensor which puts the original paper in close contact with the full-size sensor for scanning, being a monochromatic type with the pixel number of 1,728 dots and the main scanning density of 8 dots/mm.

It is composed of sensor, rod lens, LED light source, light-conductive plate, control circuit and so on, and the reading line and focus are previously adjusted as the unit.
Due to the full-size sensor, the focus distance is so short that the set is changed from the light weight type to the compact type.

2. Waveforms

The following clock is supplied from SCE114V of the control board, and VO is output.

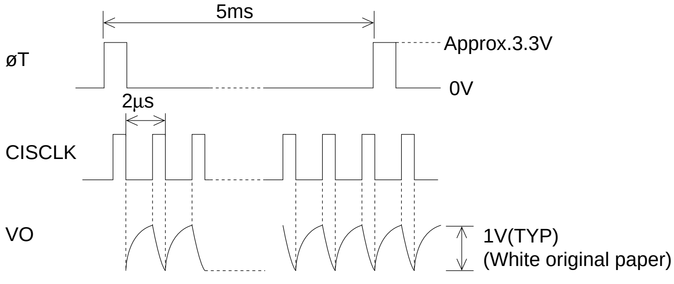
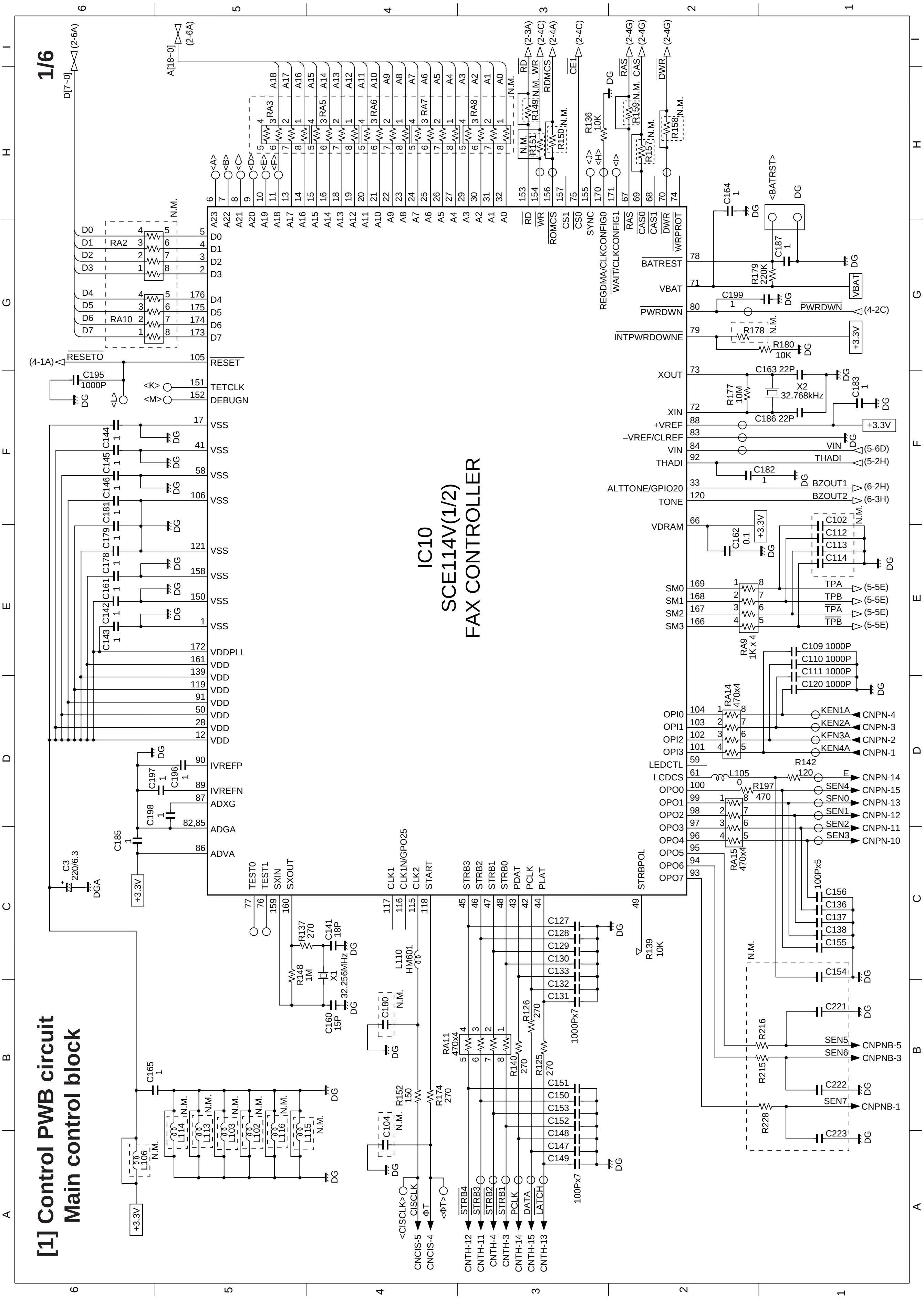
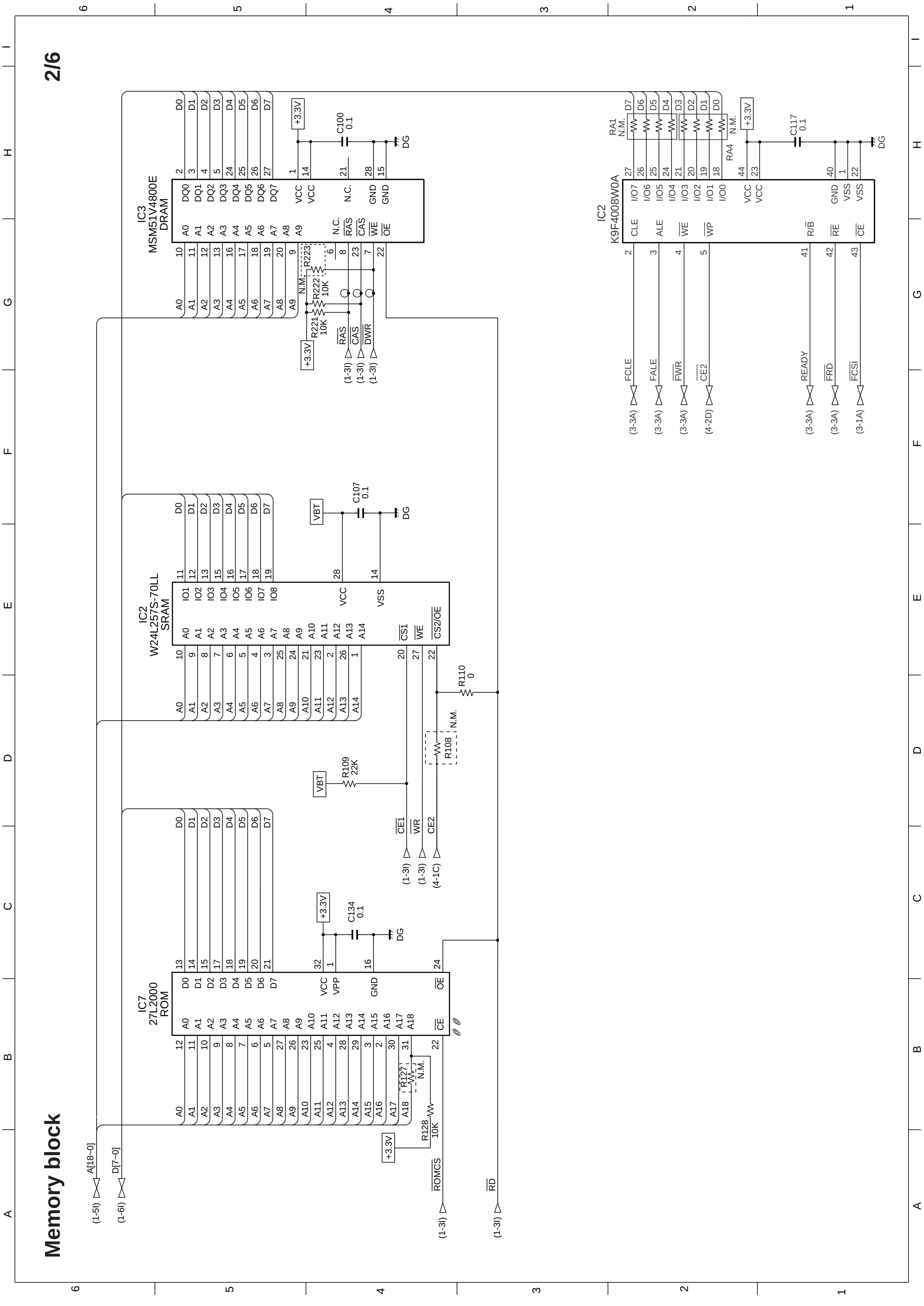
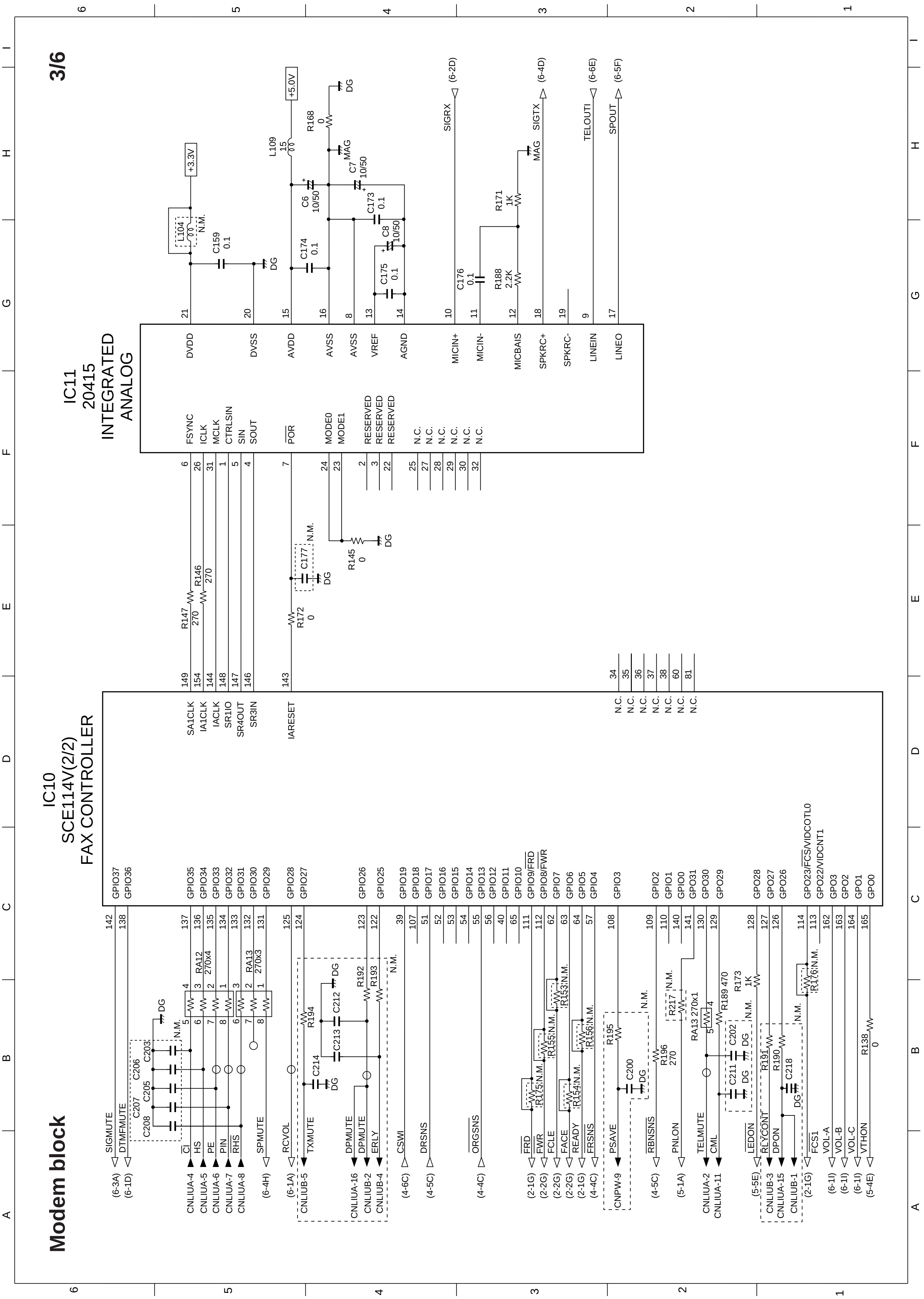


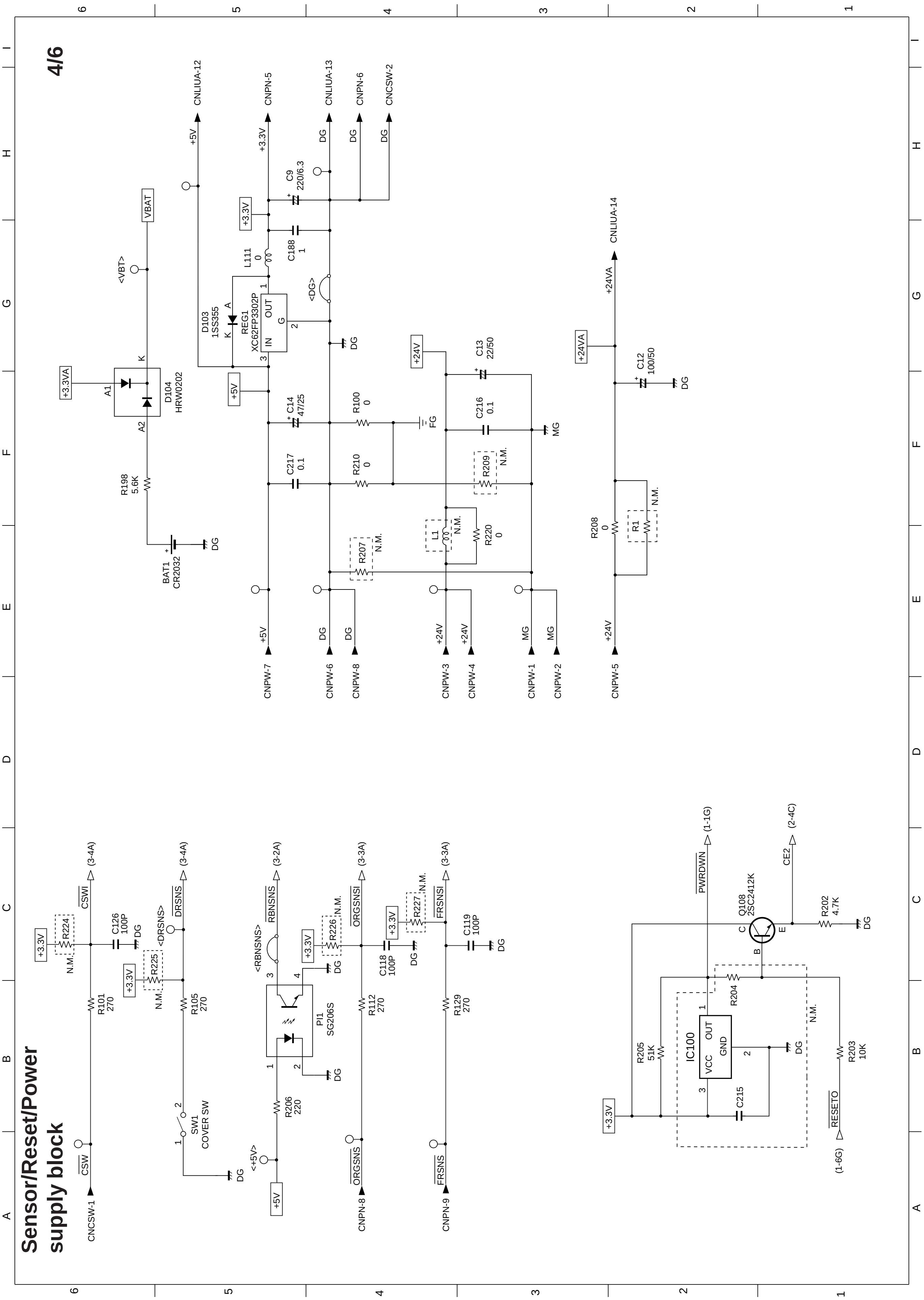
Fig. 9

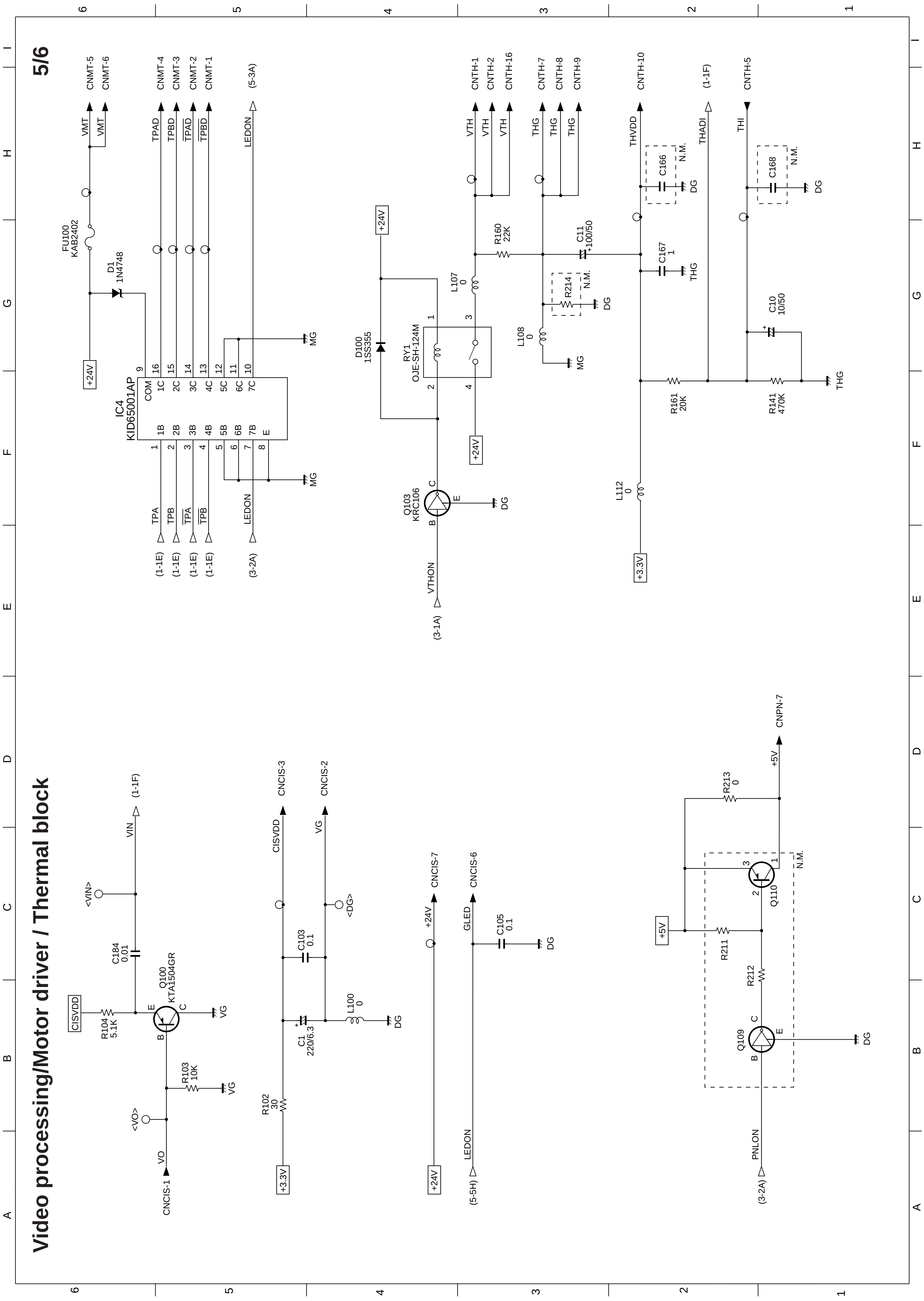
CHAPTER 6. CIRCUIT SCHEMATICS AND PARTS LAYOUT




Memory block
2/6
IC3
MSM51V4800E
DRAM
IC2
K9F4008W0A
IC2
W24L257S-70LL
SRAM
IC7
27L2000
ROM
C100
0.1
C107
0.1
C117
0.1
C134
0.1
+3.3V
VBT
DG
R221
10K
R222
10K
R223
N.M.
R109
22K
R110
0
R108
R127
R128
10K
RA1
RA4
A[18~0]
D[7~0]
ROMCS
RD
RAS
CAS
DWR
CE1
WR
CE2
FCLE
FALE
FWR
READY
FRD
FCSI

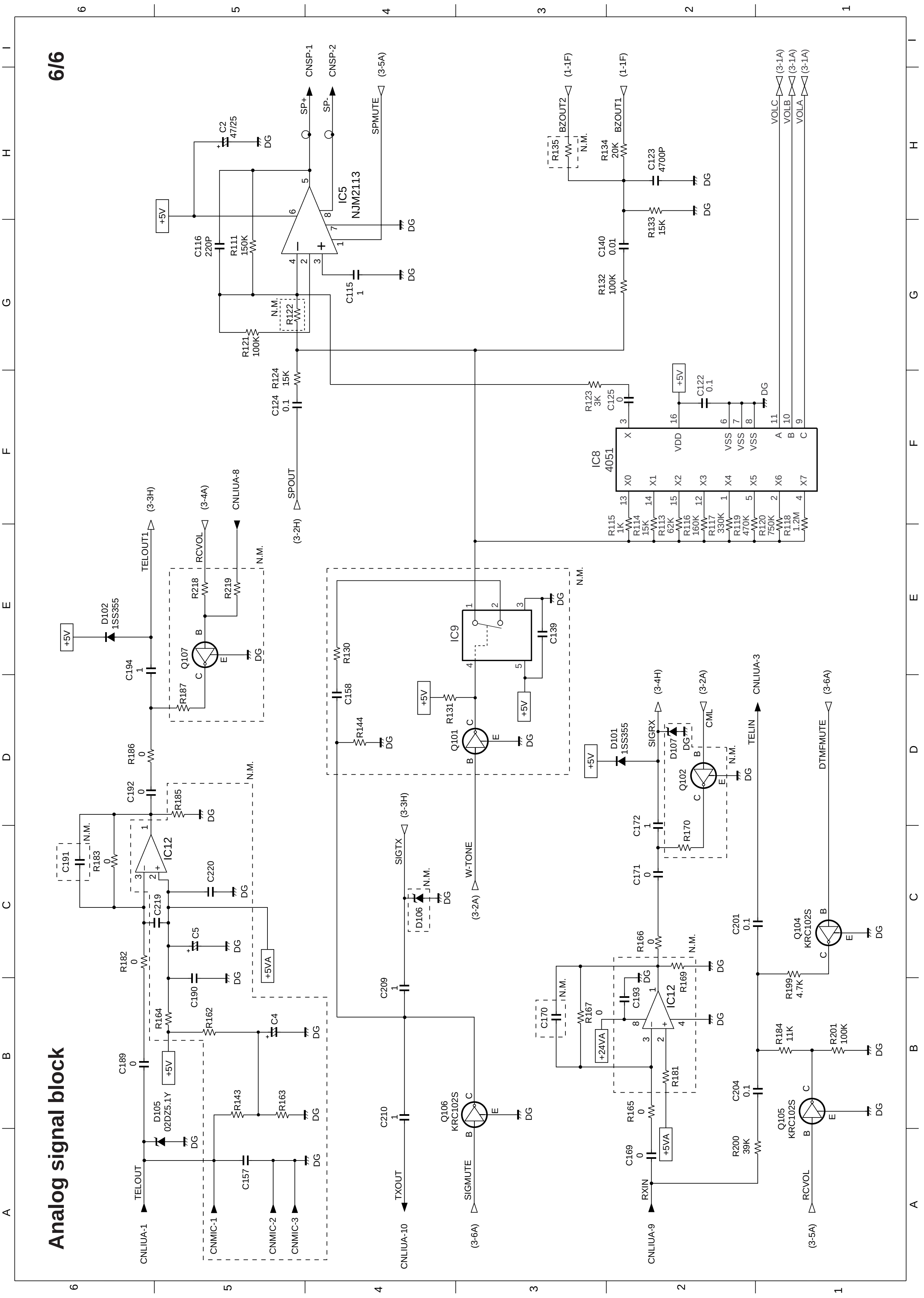

Modem block
3/6
IC10
SCE114V(2/2)
FAX CONTROLLER
IC11
20415
INTEGRATED
ANALOG


Sensor/Reset/Power supply block
4/6
CNLIUA-12
CNPN-5
CNLIUA-13
CNPN-6
CNCSW-2
CNLIUA-14
VBAT
<VBT>
+3.3VA
D104 HRW0202
R198 5.6K
BAT1 CR2032
D103 1SS355
REG1 XC62FP3302P
L111 0
C188 1
C9 220/6.3
C14 47/25
C217 0.1
R100 0
R210 0
R207 N.M.
C13 22/50
C216 0.1
R209 N.M.
L1 N.M.
R220 0
C12 100/50
R208 0
R1 N.M.
CNPW-7
CNPW-6
CNPW-8
CNPW-3
CNPW-4
CNPW-1
CNPW-2
CNPW-5
CNCSW-1
CSW
CSWI
R224 N.M.
C126 100P
R101 270
DRSNS
<DRSNS>
R225 N.M.
R105 270
SW1 COVER SW
RBNSNS
<RBNSNS>
PI1 SG206S
R206 220
ORGSNSI
R226 N.M.
C118 100P
R112 270
ORGSNS
CNPN-8
FRSNSI
R227 N.M.
C119 100P
R129 270
FRSNS
CNPN-9
PWRDWN
CE2
Q108 2SC2412K
R202 4.7K
R204
IC100
R205 51K
C215
R203 10K
RESETO
N.M.

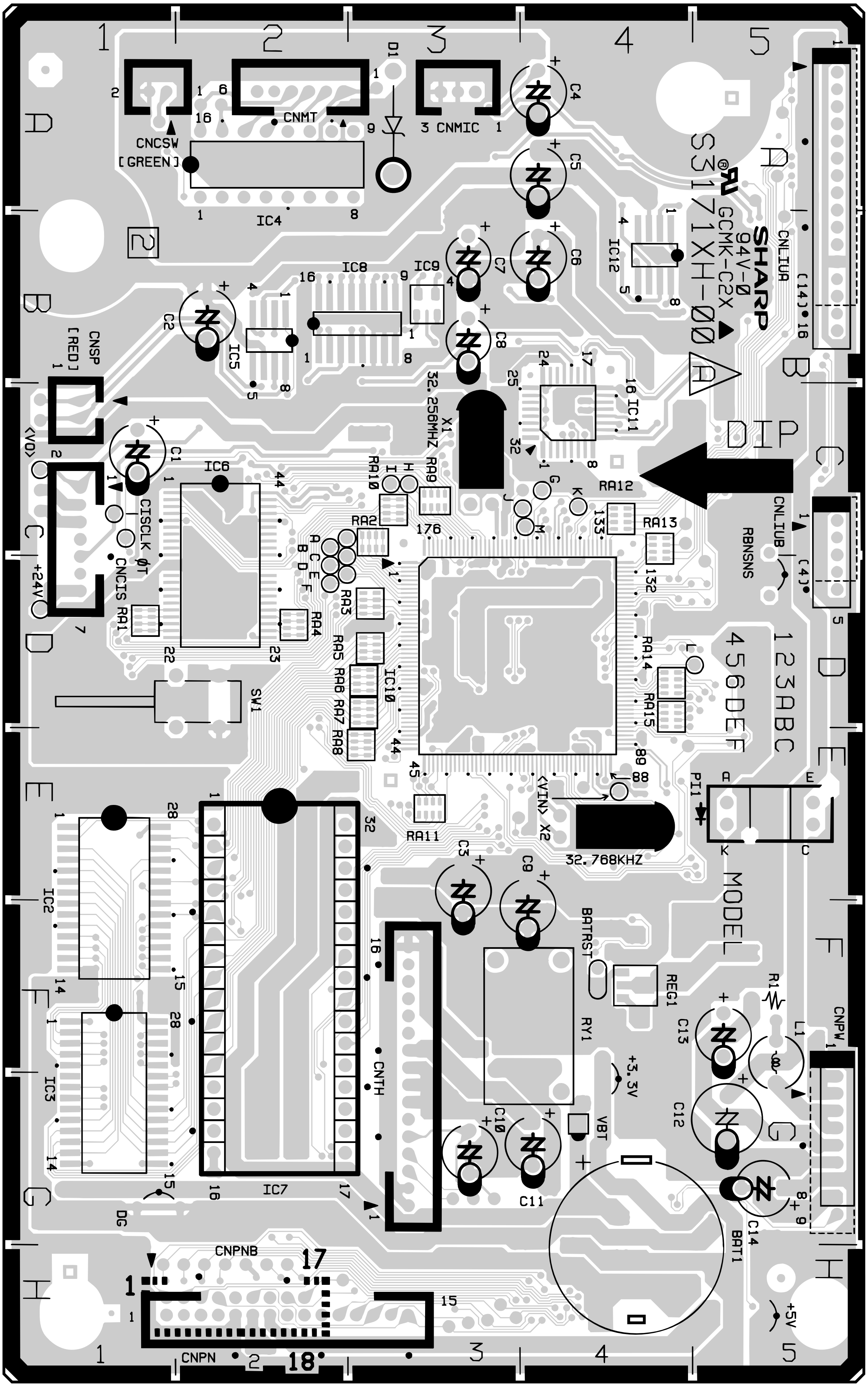

Video processing/Motor driver / Thermal block
5/6
IC4
KID65001AP
FU100
KAB2402
D1
1N4748
D100
1SS355
RY1
OJE-SH-124M
Q103
KRC106
Q100
KTA1504GR
Q109
Q110
R160
22K
R161
20K
R141
470K
R214
N.M.
C11
+100/50
C167
1
C10
10/50
C166
N.M.
C168
N.M.
L107
0
L108
0
L112
0
C184
0.01
R104
5.1K
R103
10K
R102
30
C103
0.1
C1
220/6.3
L100
0
C105
0.1
R213
0
R211
R212
CNMT-5
CNMT-6
CNMT-4
CNMT-3
CNMT-2
CNMT-1
CNTH-1
CNTH-2
CNTH-16
CNTH-7
CNTH-8
CNTH-9
CNTH-10
CNTH-5
CNCIS-1
CNCIS-3
CNCIS-2
CNCIS-7
CNCIS-6
CNPN-7
VTHON
LEDON
PNLON
GLED
CISVDD
THVDD
THADI
THI
VIN
VO
VG
+24V
+3.3V
+5V
DG
MG
THG
VTH
THG
TPA
TPB
TPAD
TPBD
VMT

Analog signal block

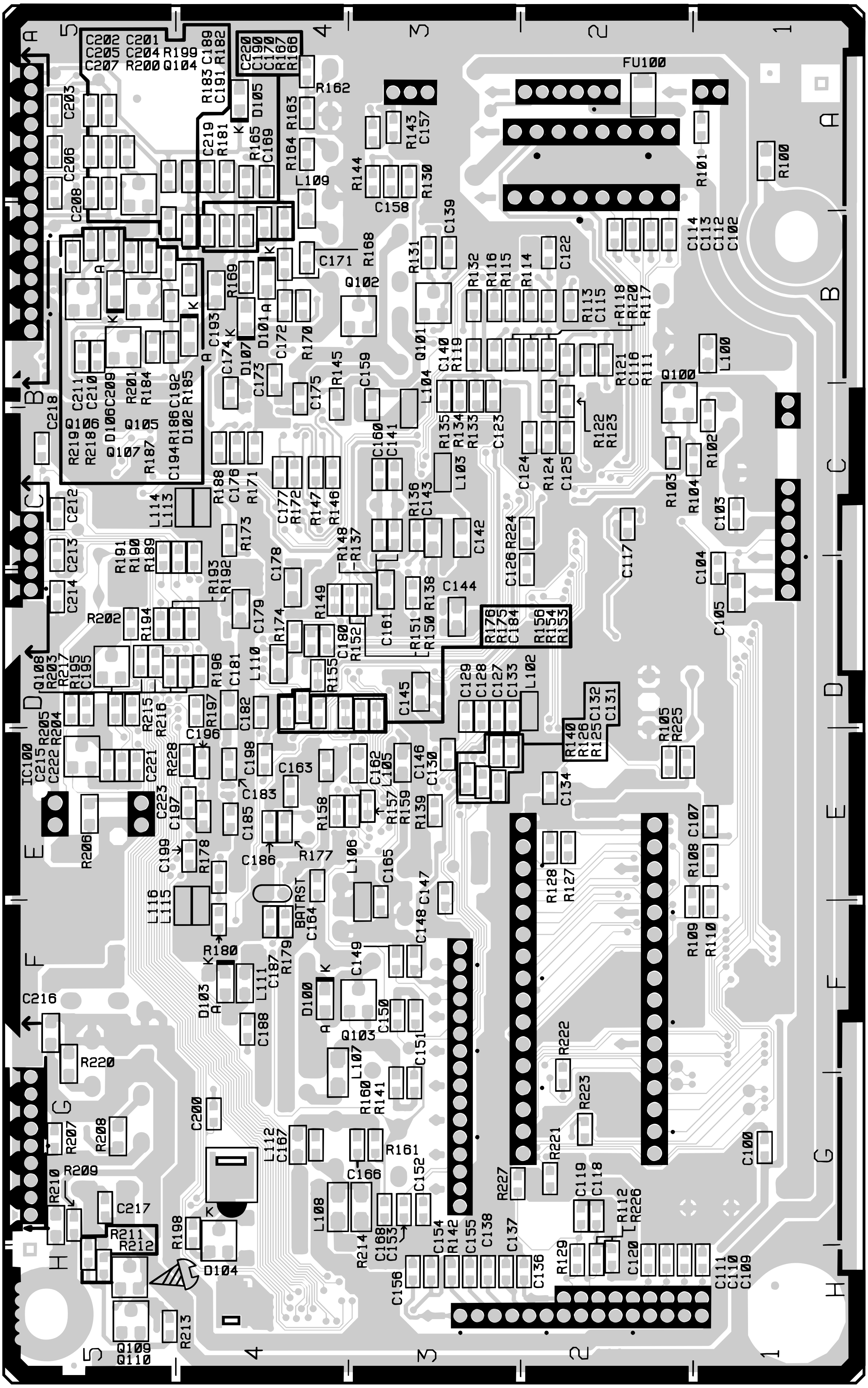
6/6



Control PWB parts layout (Top side)

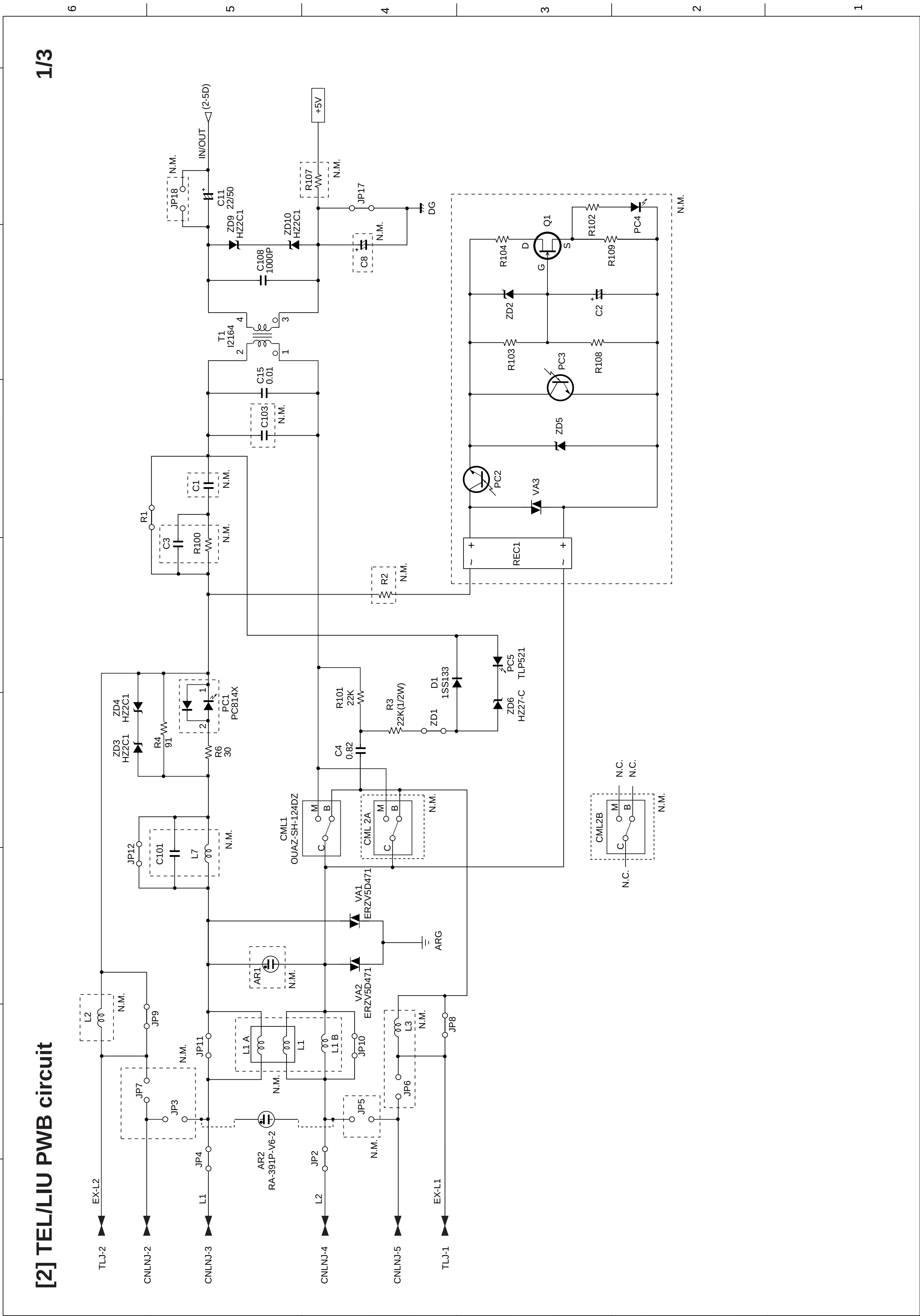


Control PWB parts layout (Bottom side)



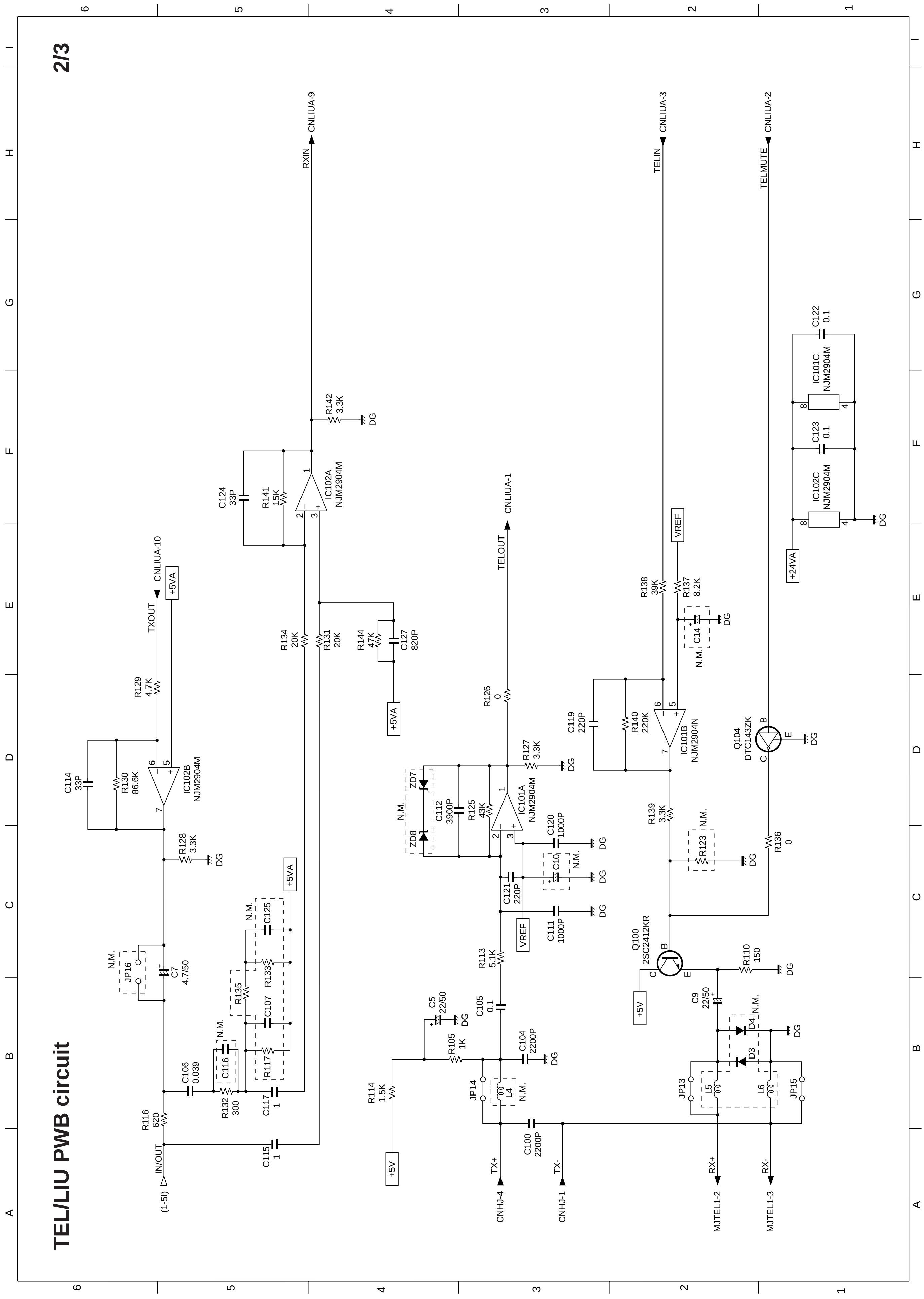
[2] TEL/LIU PWB circuit

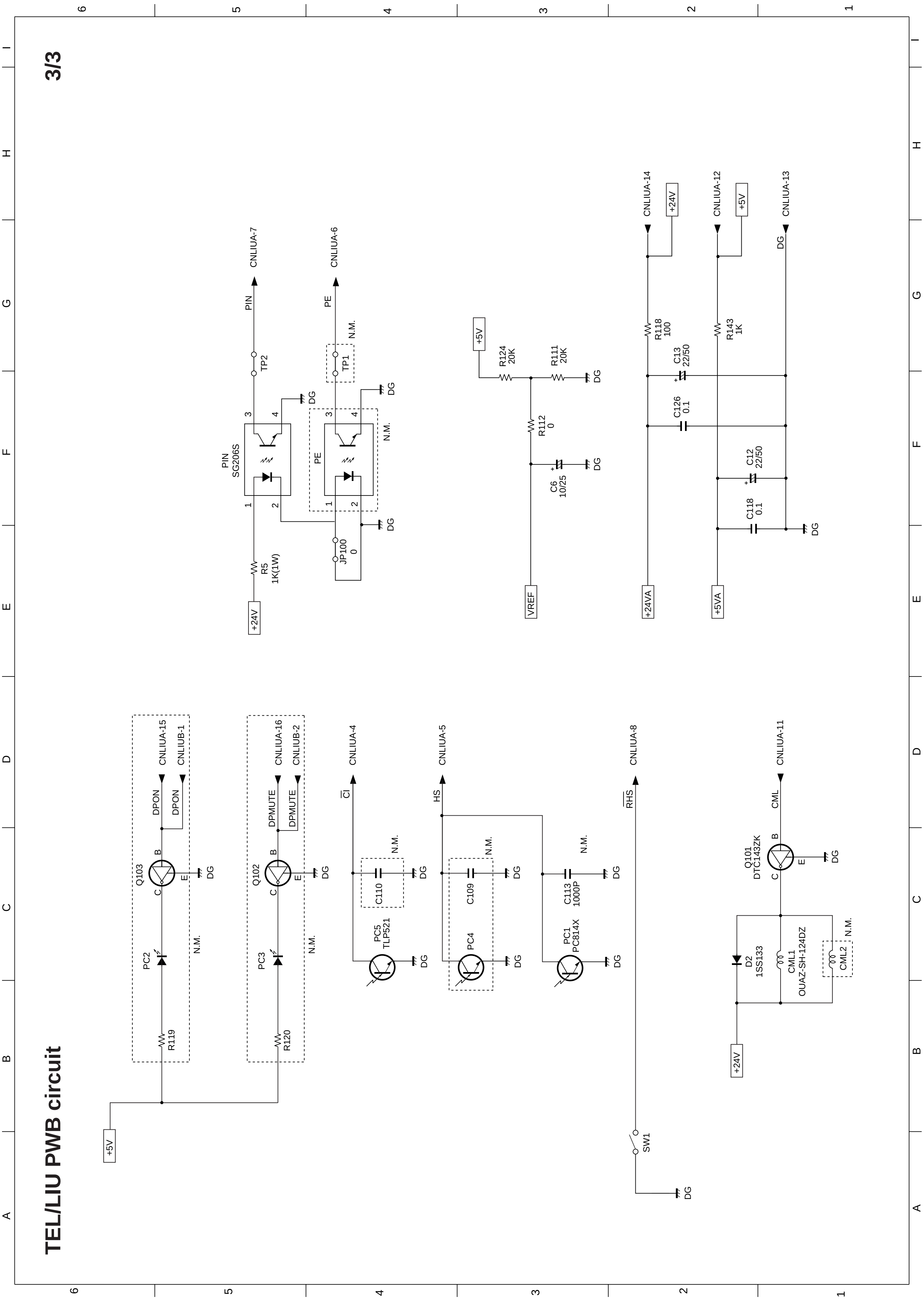
1/3



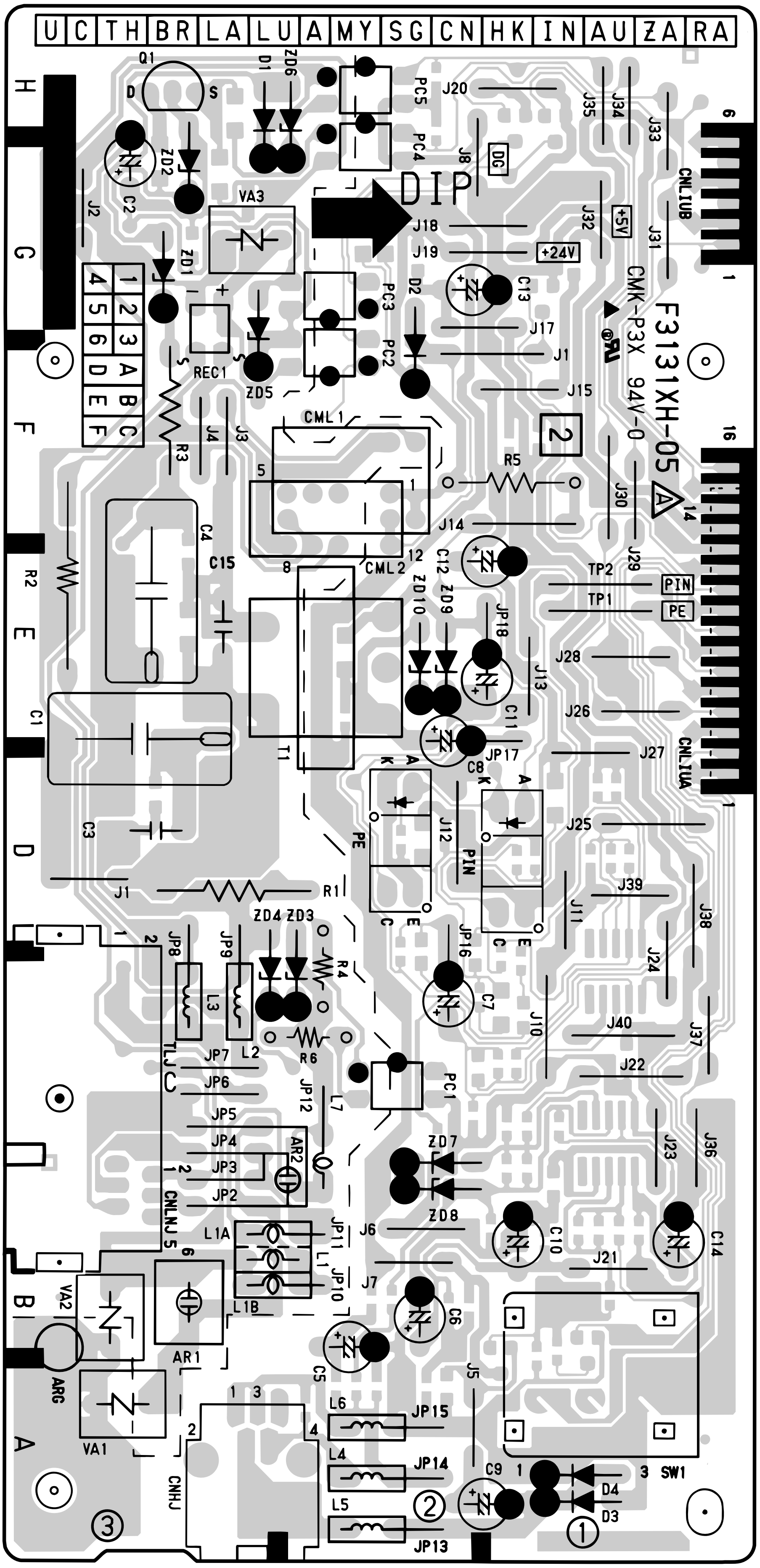
TEL/LIU PWB circuit

2/3

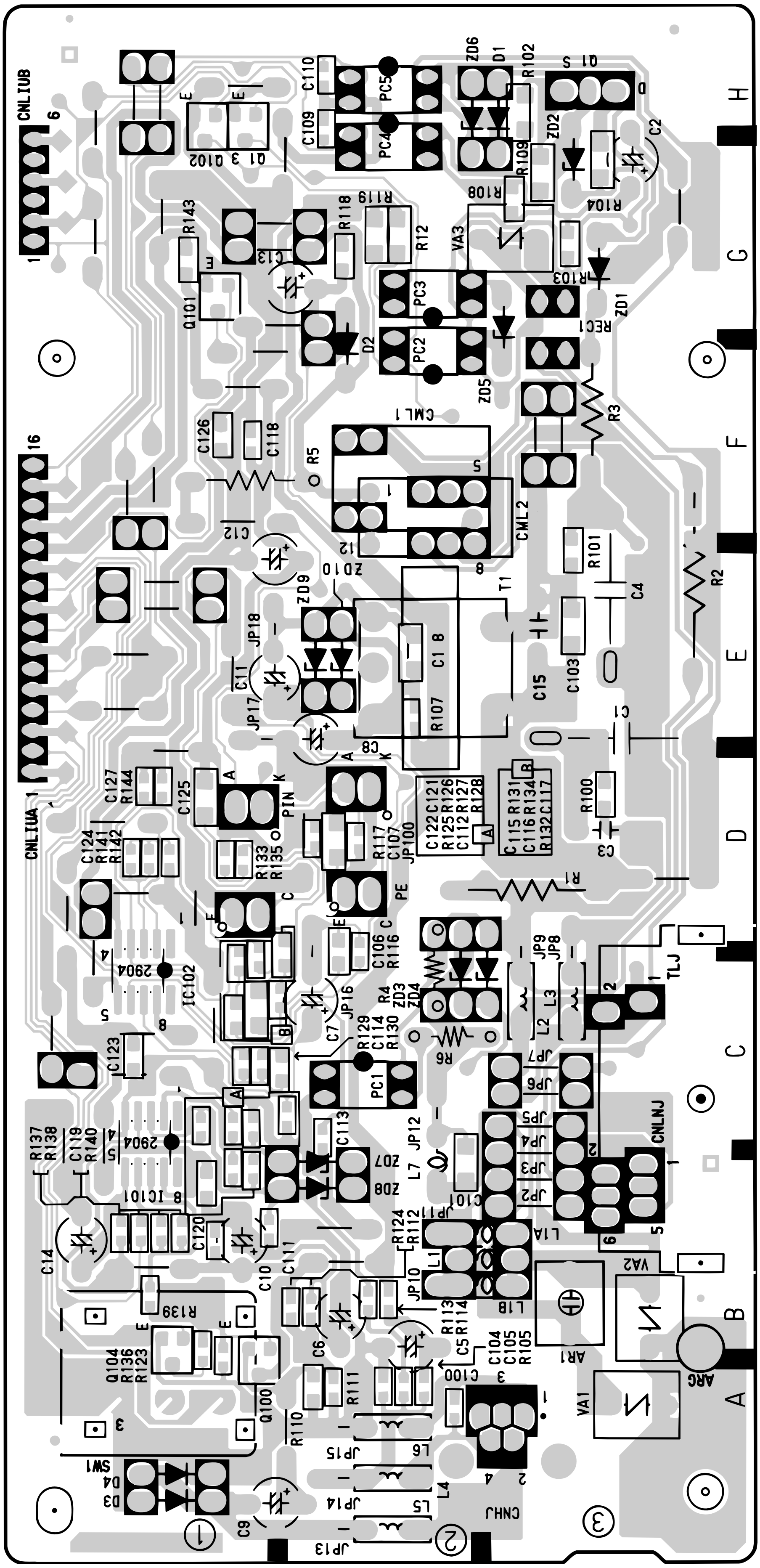



TEL/LIU PWB circuit
3/3
+5V
R119
R120
PC2
PC3
Q103
Q102
N.M.
DPON
DPMUTE
CNLIUA-15
CNLIUB-1
CNLIUA-16
CNLIUB-2
DG
+24V
R5
1K(1W)
JP100
0
PIN
SG206S
PE
TP2
TP1
PIN
CNLIUA-7
CNLIUA-6
CI
HS
CNLIUA-4
CNLIUA-5
C110
C109
PC5
TLP521
PC4
PC1
PC814X
C113
1000P
VREF
R124
20K
R111
20K
R112
0
C6
10/25
RHS
CNLIUA-8
SW1
+24VA
+5VA
R118
100
R143
1K
C13
22/50
C126
0.1
C12
22/50
C118
0.1
CNLIUA-14
CNLIUA-12
CNLIUA-13
Q101
DTC143ZK
CML
CNLIUA-11
D2
1SS133
CML1
OUAZ-SH-124DZ
CML2

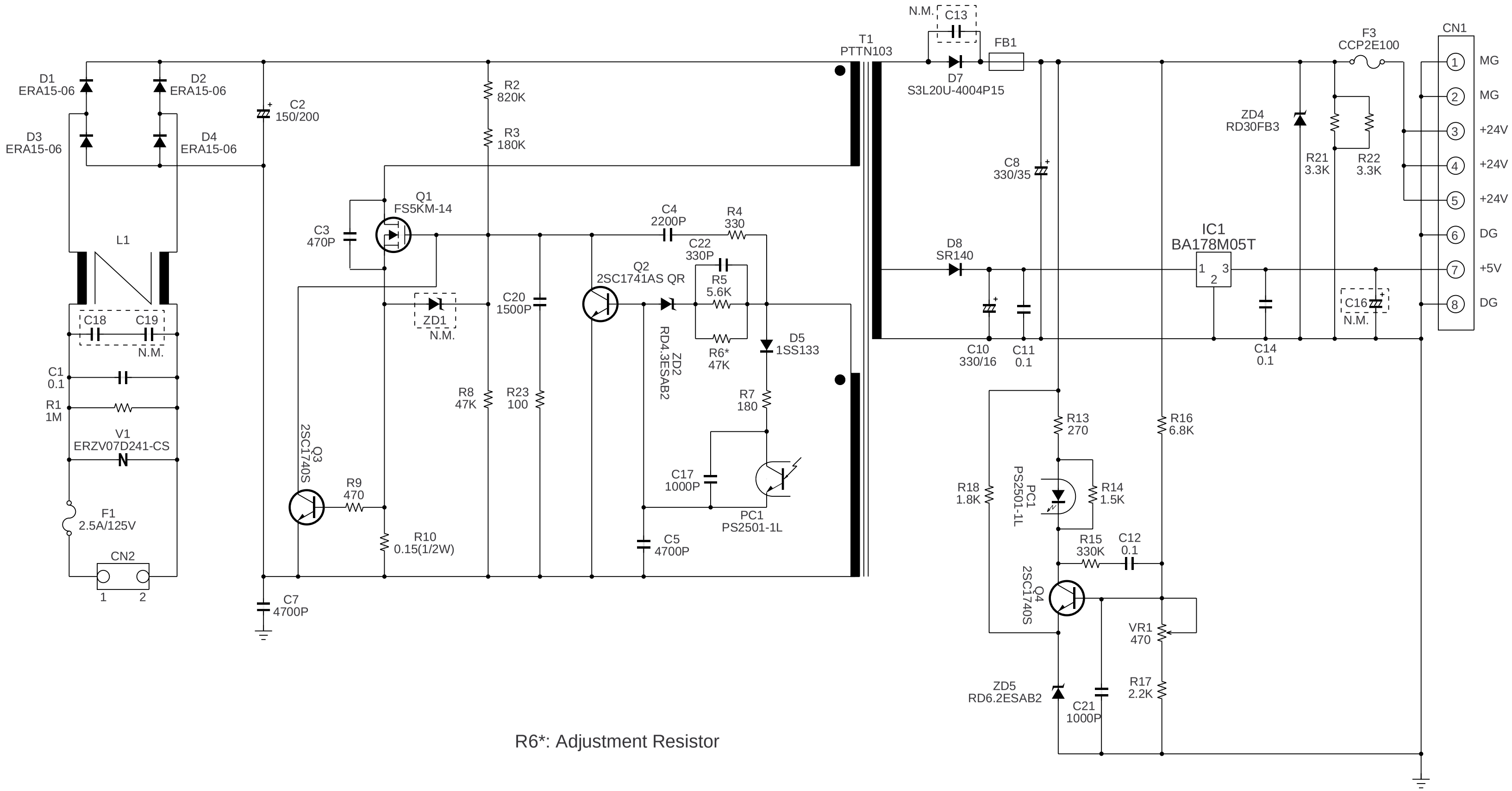
TEL/LIU PWB parts layout (Top side)



TEL/LIU PWB parts layout (Bottom side)

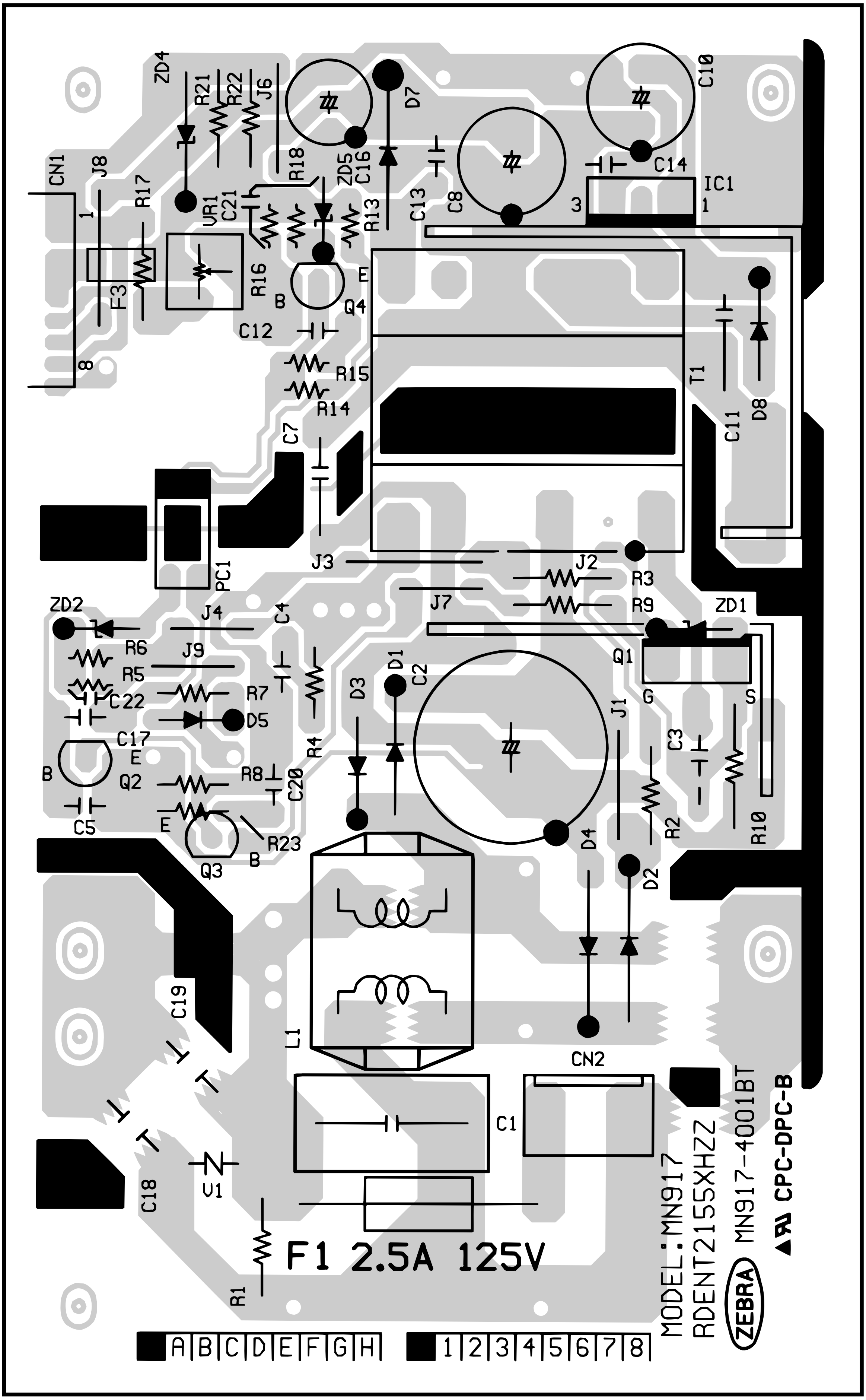


[3] Power supply PWB circuit

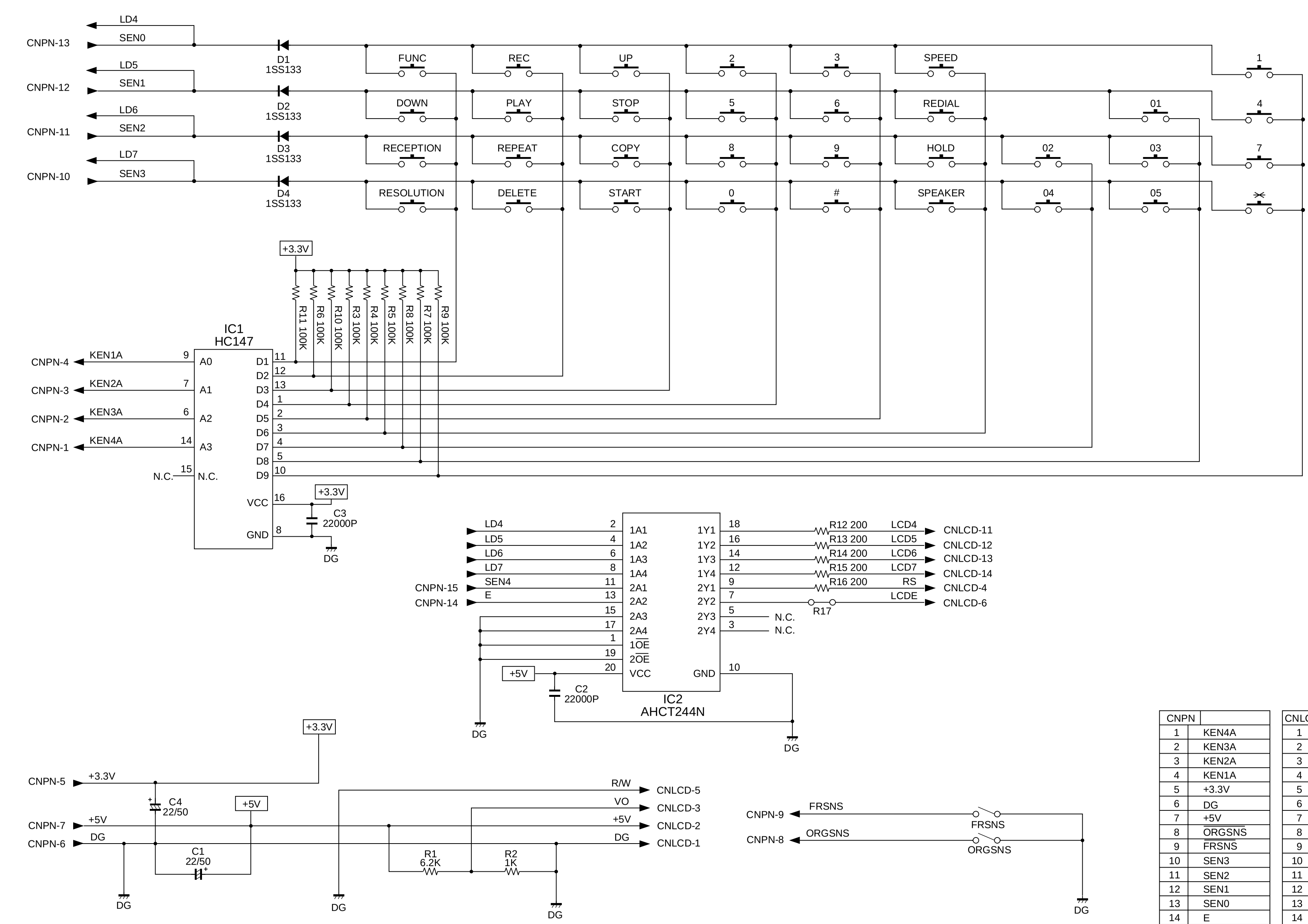


R6*: Adjustment Resistor

Power supply PWB parts layout



[4] Operation panel PWB circuit



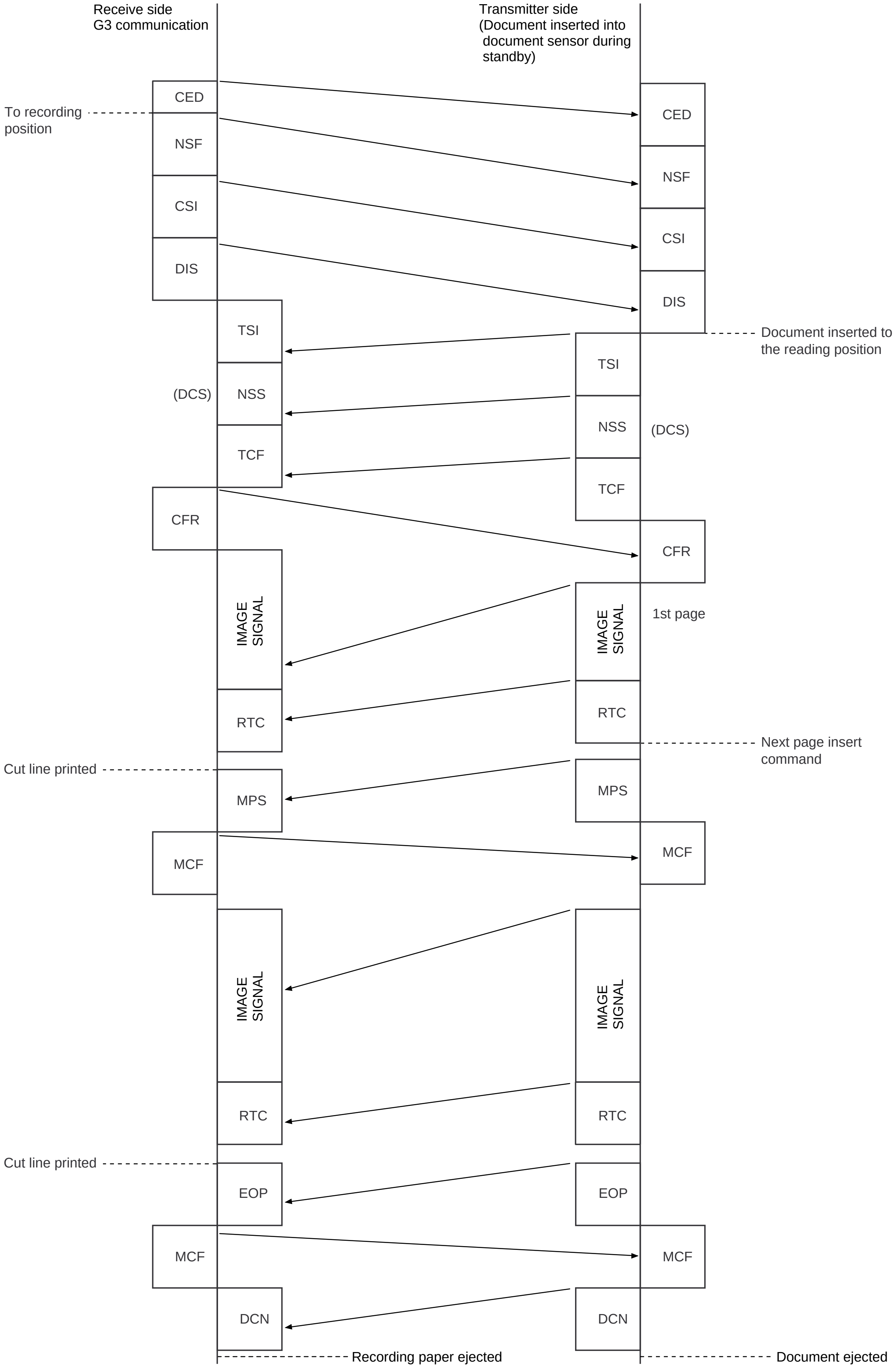
CNPN	
1	KEN4A
2	KEN3A
3	KEN2A
4	KEN1A
5	+3.3V
6	DG
7	+5V
8	ORGSNS
9	FRSNS
10	SEN3
11	SEN2
12	SEN1
13	SEN0
14	E
15	SEN4

CNLCD	
1	DG
2	+5V
3	VO
4	RS
5	R/W
6	LCDE
7	N.C.
8	N.C.
9	N.C.
10	N.C.
11	LCD4
12	LCD5
13	LCD6
14	LCD7

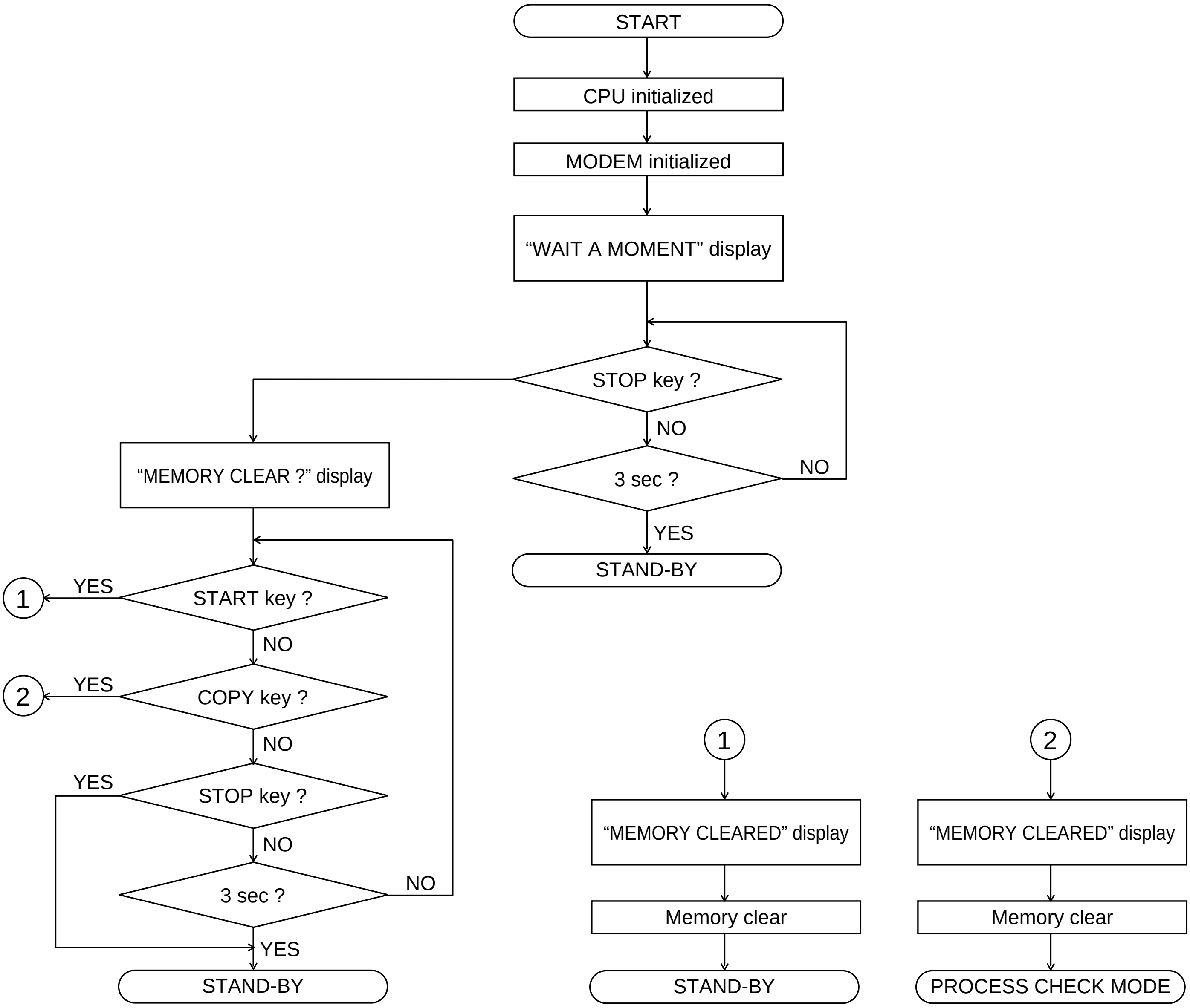
NOTE: Since the parts of PWB cannot be supplied, change it as a unit.

CHAPTER 7. OPERATION FLOWCHART

[1] Protocol



[2] Power on sequence



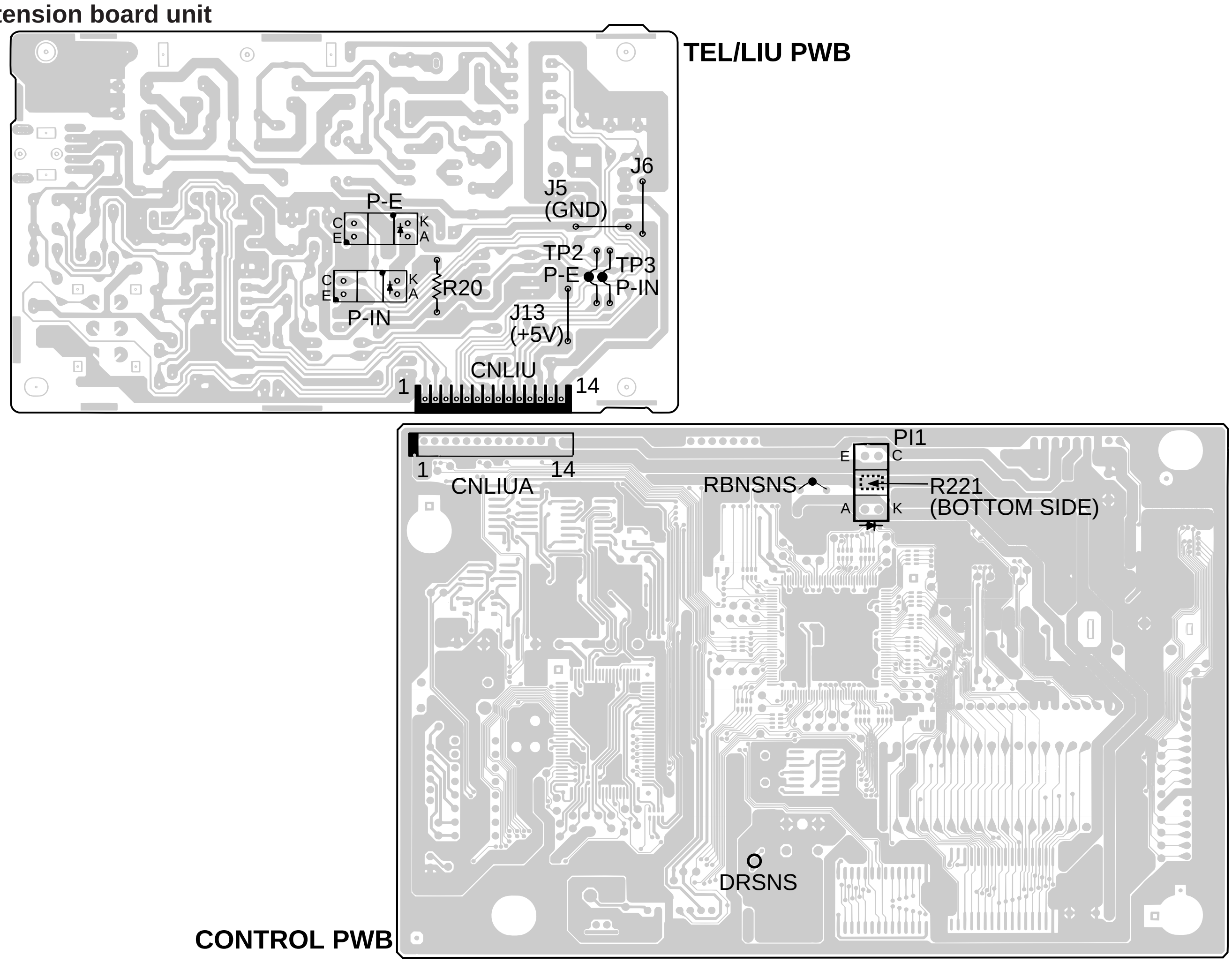
CHAPTER 8. OTHERS

[1] Service tools

1. List

NO.	PARTS CODE	DESCRIPTION	Q'TY	PRICE RANK
1	C P W B S 3 0 0 2 S C S 1	Extension board unit (Control PWB)	1	BK
2	C P W B F 3 0 0 3 S C S 1	Extension board unit (TEL/LIU PWB)	1	BP
3	P S H E Z 3 3 5 4 S C Z Z	Shading wave memory standard paper	1	AD

Extension board unit

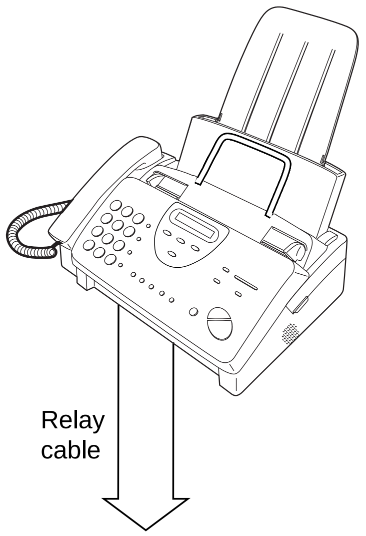


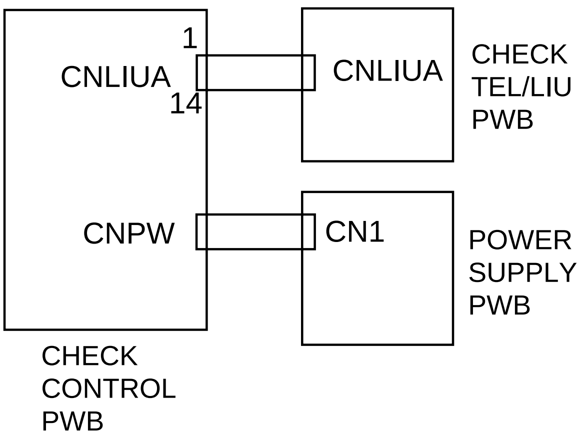
NO.	PARTS CODE	DESCRIPTION	Q'TY	PRICE RANK
1	C C N W – 4 7 5 6 S C 0 1	SPEAKER RELAY CABLE	1	AK
2	C C N W – 4 7 5 7 S C 0 1	PANEL RELAY CABLE	1	AW
3	C C N W – 4 7 5 8 S C 0 1	CIS RELAY CABLE	1	AQ
4	C C N W – 4 7 5 9 S C 0 1	HEAD RELAY CABLE	1	AX
5	C C N W – 4 7 6 0 S C 0 1	CAM SWITCH RELAY CABLE	1	AK
6	C C N W – 4 7 6 3 S C 0 1	MOTOR RELAY CABLE	1	AP
7	Q C N W – 4 9 6 9 S C Z Z	PAPER SENSOR RELAY CABLE	1	BF
8	V R S – T S 2 A D 2 2 1 J	RESISTOR (1/10W 220Ω ±5%)[R221]	1	AA
9	V H P S G 2 0 6 S / / –1	PHOTO TRANSISTOR [PI1]	1	AG
10	Q S W – M 2 2 5 9 X H Z Z	COVER SWITCH [SW1]	1	AF
11	Q C N C M 2 5 7 5 S C 1 D	CONNECTOR (14PIN)[CNLIUA]	1	AC
12	V R D – H T 2 E Y 1 0 1 J	RESISTOR (1/4W 100Ω ±5%)[R20]	1	AA
13	V H P S G 2 0 6 S / / –1	PHOTO TRANSISTOR [P-IN]	1	AG
14	V H P S G 2 0 6 S / / –1	PHOTO TRANSISTOR [P-E]	1	AG
15	Q C N C W 2 5 0 9 S C 1 D	CONNECTOR (14PIN)[CNLIU]	1	AF

2. Description

2-1. Relay board unit

1. Remove the TEL/LIU PWB, control PWB and Power Supply PWB from this unit, and mount the relay board unit instead.
   - Before connecting the wiring to the relay board unit, set the test PWB switches to the fixed position.
2. The setting is as follows.



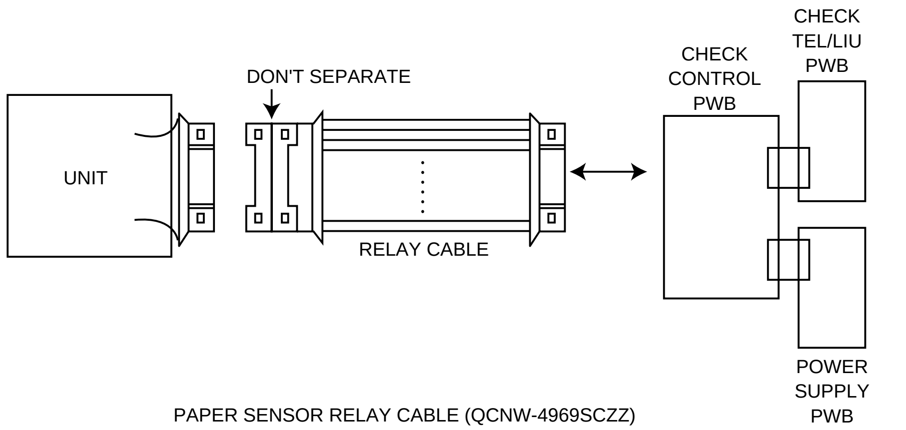


- The relay cables are used as one pair.
- The cover swtich and hook switch are manually operated.
- The recording paper sensor(P-E) is not used.

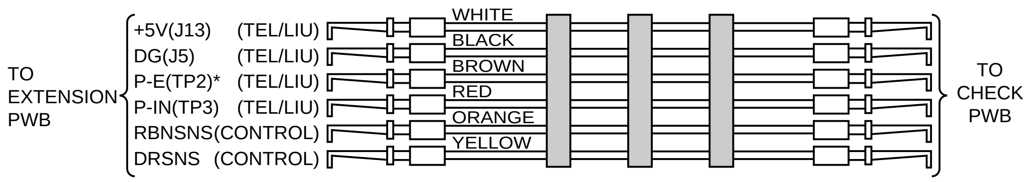
The hook switch are operated by OR of the mechanical unit switch and the test PWB switch. When performing installation in the machine unit, set the test PWB switches to the fixed position.

	Mechanical unit	PWB to be tested
	Actual operation with mechanical unit	
Hook SW	ON/OFF operation	ON-HOOK
	PWB sensor check	
Hook SW	ON-HOOK	ON/OFF operation

NOTE



PAPER SENSOR RELAY CABLE (QCNW-4969SCZZ)



* P-E is not used.

3. Shading paper

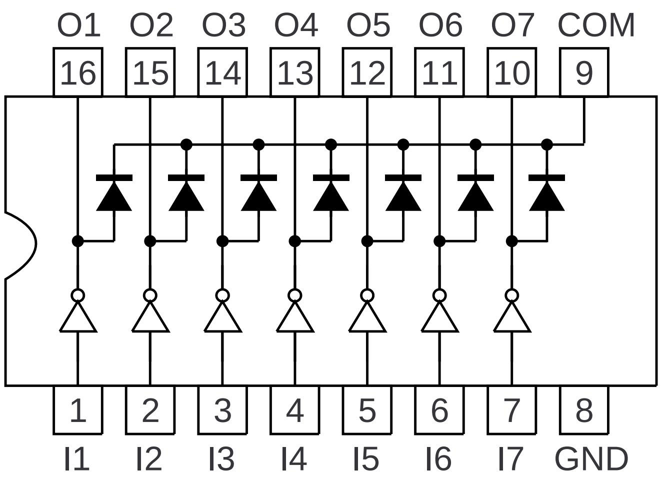
The white and black basis is applied to remember the shading waveform. Be sure to perform this operation when replacing the battery or replacing the control PWB. Execute in the shading mode of DIAG mode.

SHADING WAVE MEMORY STANDARD PAPER (PSHEZ3579SCZZ)

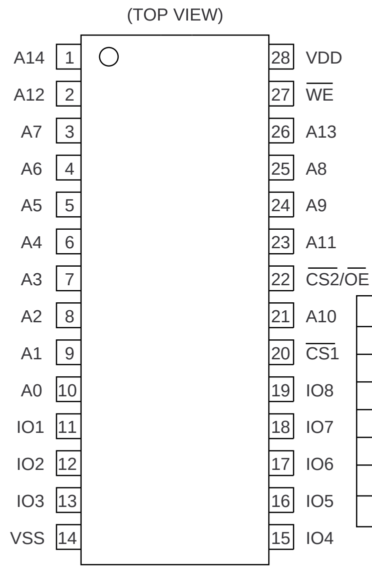
[2] IC signal name

CONTROL PWB UNIT

IC4: VHiKiD65001AP (KID65001AP)

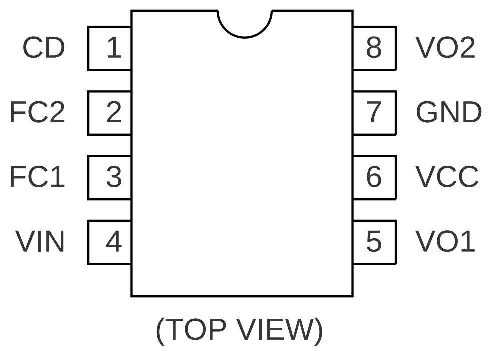


IC2: VHiW24L257S7L (W24L257S-70LL)

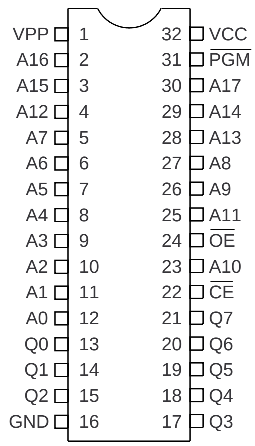


Pin name	Signal
A0~A14	Address input
$\overline{CS1}$/$\overline{CS2}$	Chip enable
$\overline{WE}$	Write enable
$\overline{OE}$	Write enable
I/O1~I/O8	Data I/O
VDD	Power source
VSS	Ground

IC5: VHiNJM2113M-1 (NJM2113M)

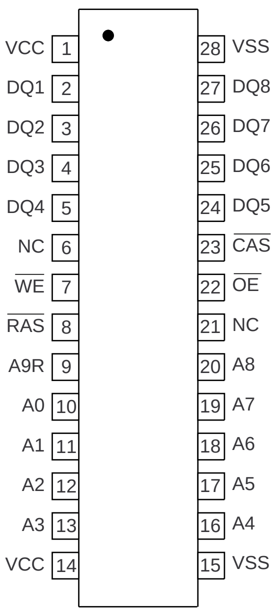


IC7: VHi27L20012MX (27L2000)



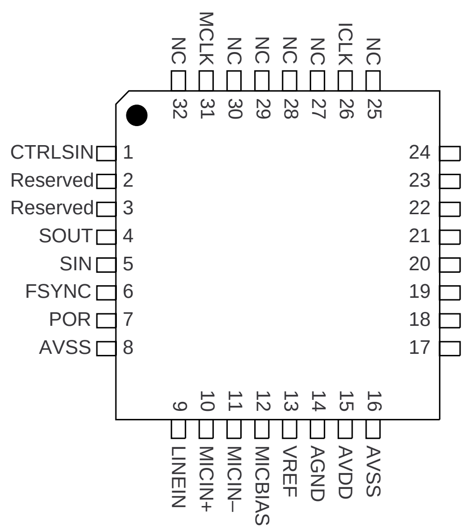
PIN NAME	SIGNAL
A0~A17	ADDRESS INPUT
Q0~Q7	DATA INPUT/OUTPUT
$\overline{CE}$	CHIP ENABLE INPUT
$\overline{OE}$	OUTPUT ENABLE INPUT
$\overline{PGM}$	PROGRAMMABLE ENABLE INPUT
VPP	PROGRAM SUPPLY VOLTAGE
NC	NO INTERNAL CONNECTION
VCC	POWER SUPPLY PIN (+5V)
GND	GROUND PIN

IC3: RH-iX2168SCZZ (MSM51V4800E)

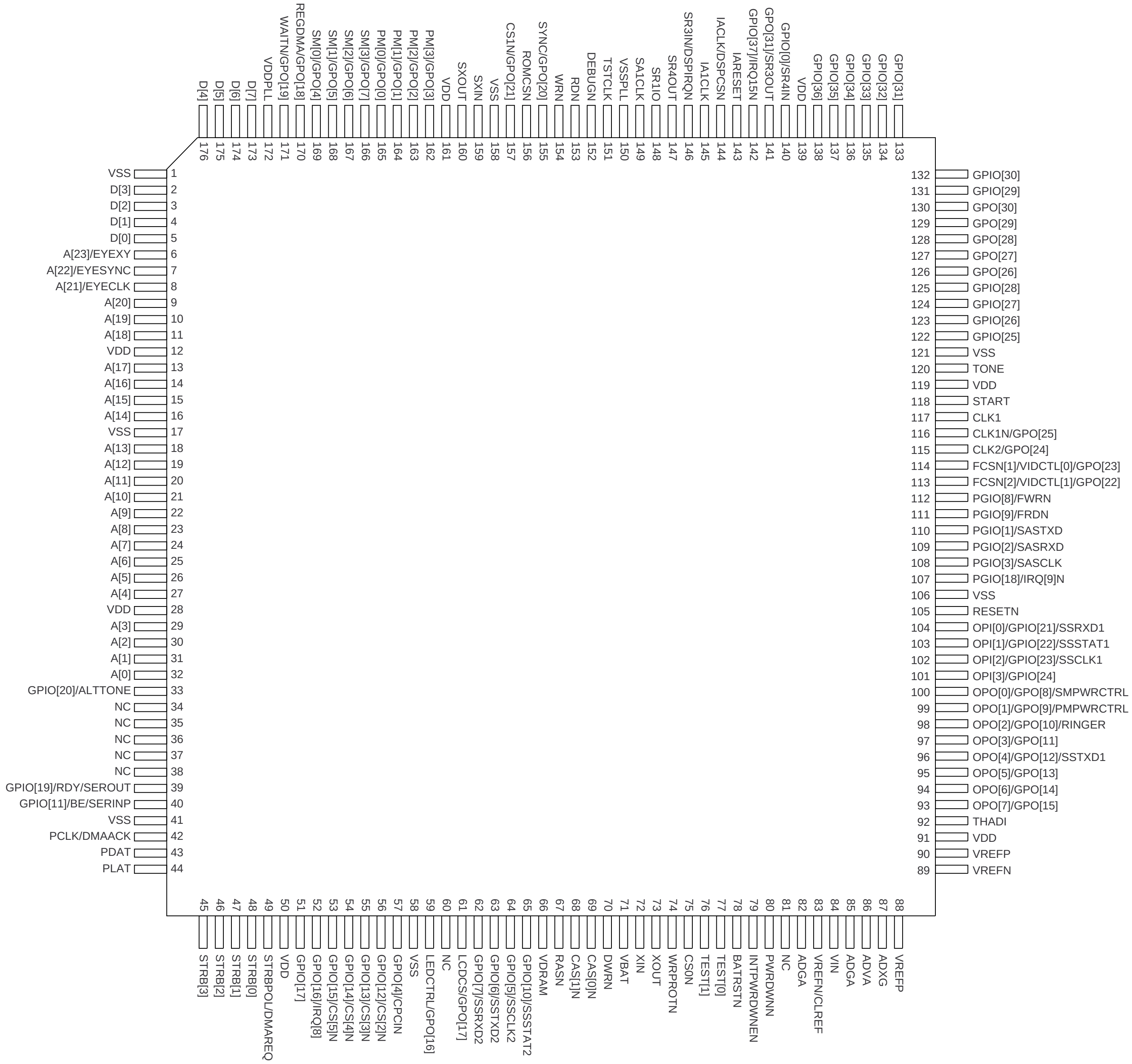


PIN NAME	SIGNAL
A0~A8, A9R	ADDRESS INPUT
$\overline{RAS}$	ROW ADDRESS STROBE
$\overline{CAS}$	COLUMN ADDRESS STROBE
DQ1~DQ8	DATA INPUT/OUTPUT
$\overline{OE}$	OUTPUT ENABLE
$\overline{WE}$	WRITE ENABLE
VCC	POWER SUPPLY (+3.3V)
VSS	GROUND
NC	NO INTERNAL CONNECTION

IC11:VHiSCE114V/-1 (20415)



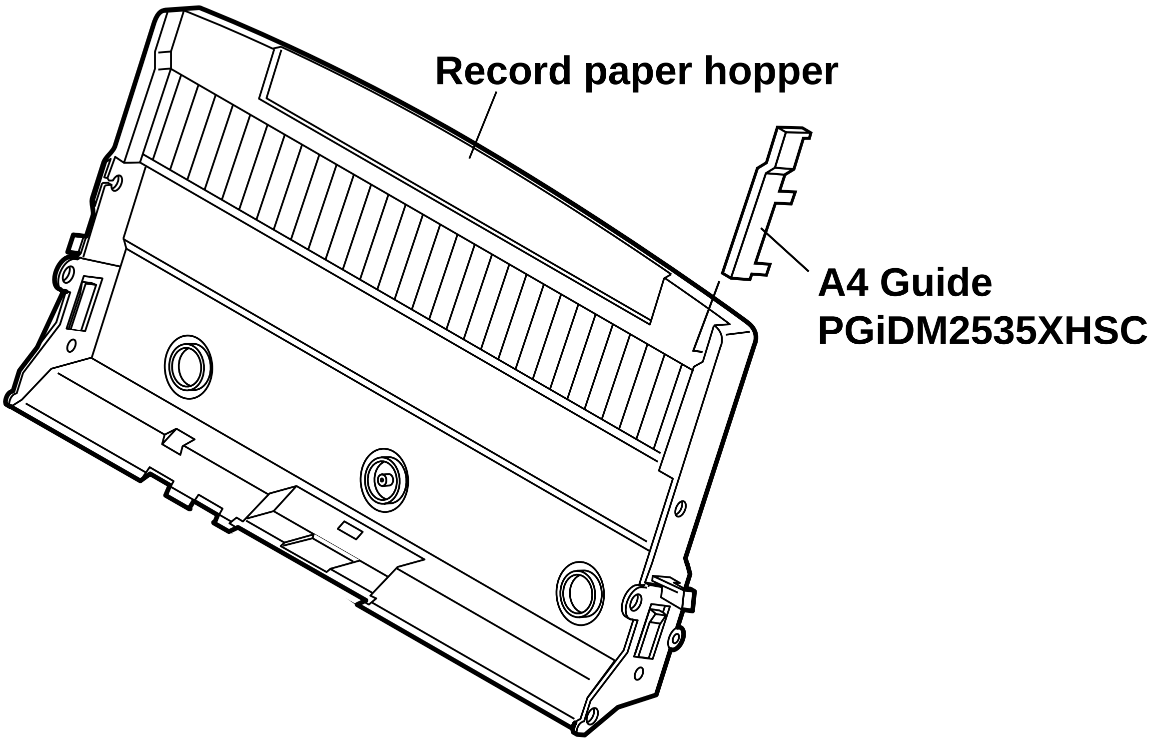
IC10: VHiSCE114V/-1 (SCE114V)



[3] Changing the record paper size (UX-465L/C only)

How to change the A4 size and letter size of the record papers

1) It becomes the record paper of the A4 size by installing A4 guide (PGiDM2535XHSC) which shows in the drawing. Remove A4 guide when you use the record paper of the letter size.



2) Set soft switch SW-L2 No.1 and the initialization of SW-L2 No.2 as follows.

SW NO.	DATA NO.	ITEM	Switch setting and function				Initial setting	Remarks
			1		0			
SW l L2		Paper set size		LETTER	LEGAL	A4		OPTION
	1		No. 1	0	0	1	0	
	2		No. 2	0	1	0	0	

MEMO

SHARP PARTS GUIDE

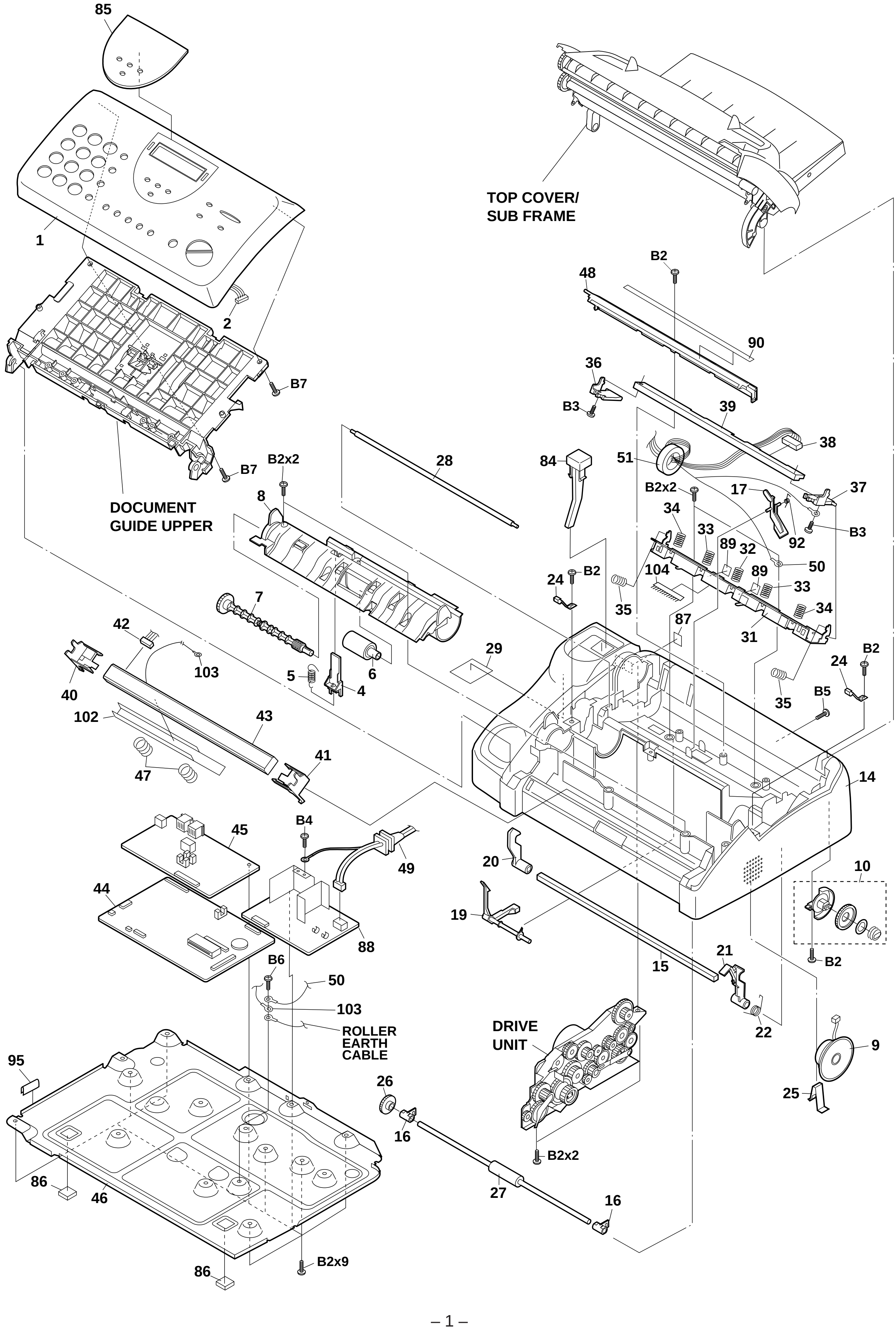
UX-465L
UX-465
MODEL UX-485

SELECTION CODE	DESTINATION
UX-465L (Open LCR)	U.S.A.
UX-465C	Canada
UX-485LU	L.A.G. (120V)

CONTENTS

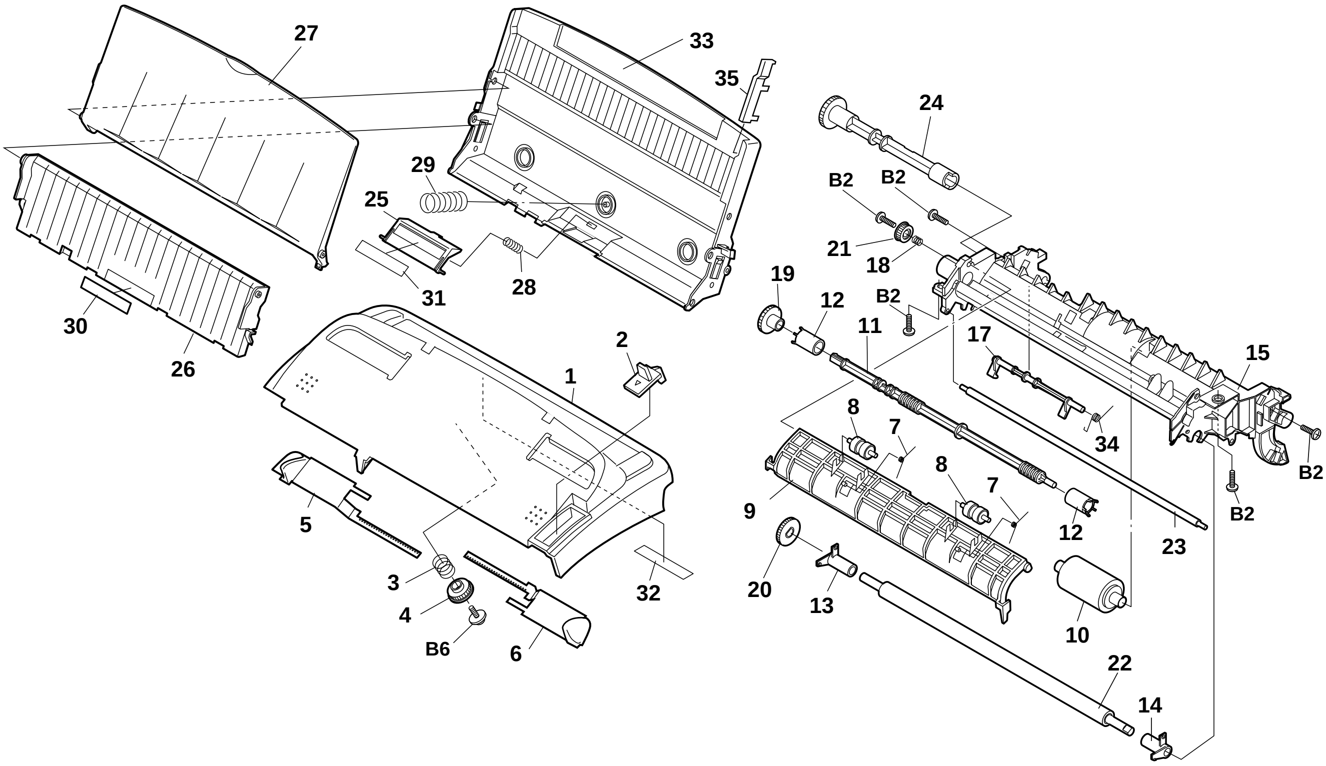
Because parts marked with "⚠" are indispensable for the machine safety maintenance and operation, it must be replaced with the parts specific to the product specification.

[1] Cabinet, etc.



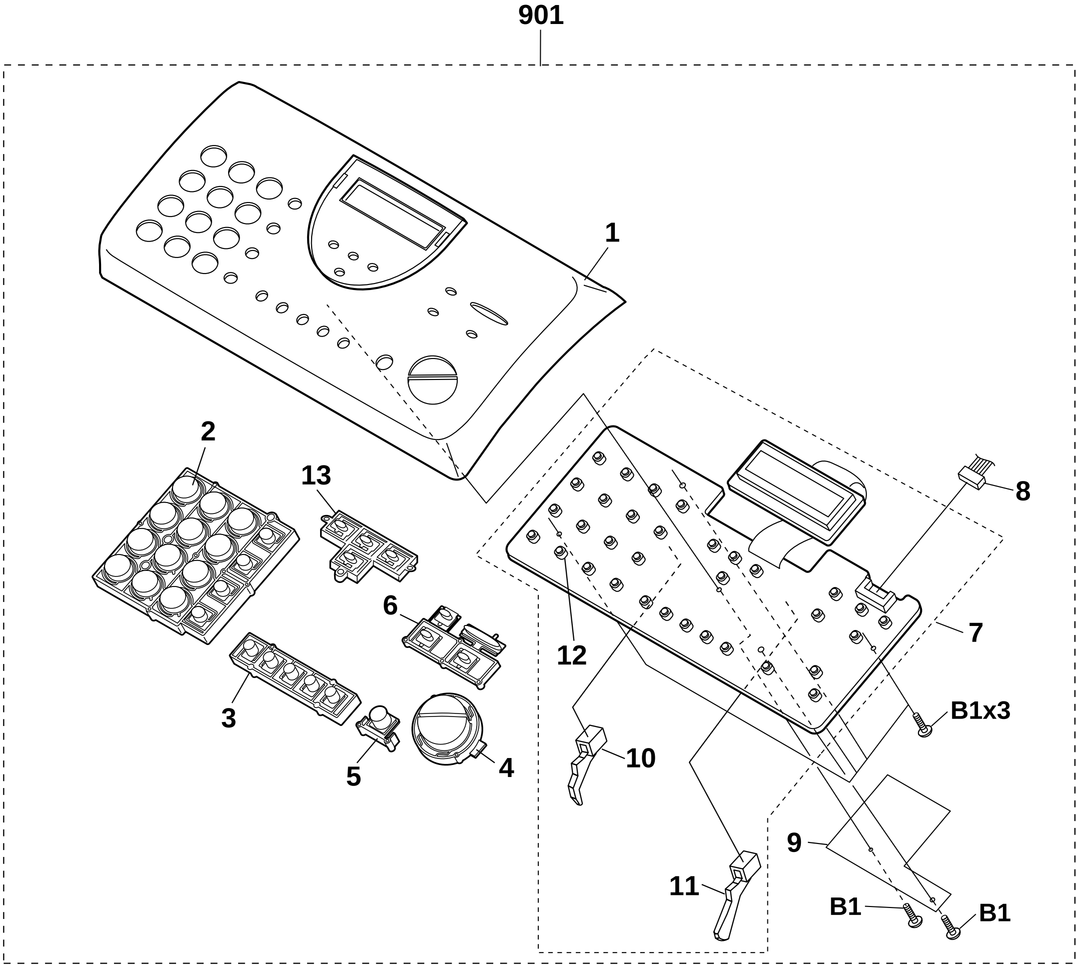
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[1] Cabinet,etc.					
1	DCEKP253CXH13	BE	N	E	Operation panel unit [465L]
	DCEKP253CXH17		N	E	Operation panel unit [465C]
	DCEKP253CXH22		N	E	Operation panel unit [485LU]
2	QCNW-231AXHZZ	AG		C	Panel cable
4	MLEVP2297XHZA	AC		C	Cover switch lever
5	MSPRT3069XHFJ	AB		C	Cover switch spring
6	NROLR2375XHZZ	AL		C	Feed roller
7	NSFTP2302XHZZ	AD		C	Feed roller shaft
8	PGIDM2538XHZZ	AM		C	Original paper guide
9	CCNW-4938XH01	AL		C	Speaker ass'y
10	CGERH2444XHY1	AF		C	BT gear ass'y
14	GCABB2325XHSH	AZ		D	Lower cabinet [465L]
	GCABB2325XHSJ	BA		D	Lower cabinet [465C]
	GCABB2325XHSM	BA		D	Lower cabinet [485LU]
15	LANGF2817XHFW	AF		C	Platen lock bracket
16	LBSHP2088AXZZ	AC		C	Transfer bearing
17	MLEVP2290XHZZ	AC		C	Film sensor lever
19	MLEVP2294XHYZ	AD		C	P-IN sensor lever B
20	MLEVP2295XHZZ	AD		C	Platen lock lever,left
21	MLEVP2296XHZZ	AD		C	Platen lock lever,right
22	MSPRD3082XHFJ	AC		C	Platen lock spring
24	MSPRP3054XHFJ	AD		C	Panel lock lever spring
25	MSPRP3055XHFJ	AD		C	Speaker holder plate spring
26	NGERH2445XHZZ	AB		C	Back roller gear
27	NROLR2410XHZZ	AP		C	PO roller
28	NSFTM2311XHZZ	AG		C	Film guide shaft
29	PSHEZ3443XHZZ	AE		C	Sheet A
31	LFRM-2198XHZZ	AK		C	Head frame
32	MSPRC3103XHFJ	AC		C	Head spring F
33	MSPRC3102XHFJ	AC		C	Head spring E
34	MSPRC3059XHFJ	AC		C	Head spring C
35	MSPRC3061XHFJ	AB		C	Head spring D
36	PGIDM2531XHZZ	AD		C	Head guide,left
37	PGIDM2532XHZZ	AD		C	Head guide,right
38	QCNW-4936XHZZ	AN		C	Head cable
39	RHEDZ2062XHZZ	BN		B	Thermal head
40	PGIDM2529XHZZ	AD		C	CIS guide,left
41	PGIDM2530XHZZ	AD		C	CIS guide,right
42	QCNW-4939XHZZ	AF		C	CIS cable
43	RUNTZ2060XHZZ	BK		B	CIS unit
44	DCEKC584PXHZZ	BQ	N	E	Control PWB unit(Within ROM) [465L]
	DCEKC687PXHZZ		N	E	Control PWB unit(Within ROM) [465C]
	DCEKC886PXHZZ		N	E	Control PWB unit(Within ROM) [485LU]
45	DCEKL254CXH06	BA	N	E	TEL/LIU PWB unit
46	LPLTM2995XHFW	AS		C	Bottom plate
47	MSPRC3057XHFJ	AC		C	CIS spring
48	PCOVP2122XHZZ	AK		C	Head cover
⚠ 49	QACCD2027XHZZ	AR		B	AC cord ass'y
50	QCNW-460AXHZZ	AE	N	C	Head earth cable
⚠ 51	RCORF2125XHZZ	AE		B	Core
84	MLEVP2302XHZZ	AC		C	Hook swith lever
85	HPNLH2391XHSU	AG	N	D	Decoration panel [465L/C]
	HPNLH2391XHS8		N	D	Decoration panel [485LU]
86	GLEGG2068XHZZ	AC		C	Rubber leg
87	PSHEZ3410XHZZ	AB		C	Jack sheet
⚠ 88	RDENT2155XHZZ	BD		E	Power supply PWB unit
89	PCUSS2120XHZZ	AB		C	Head cushion
90	PSHEZ3429XHZZ	AD		C	Head guide sheet
92	MSPRD3104XHFJ	AC		C	Film sensor lever spring
95	PSHEZ3432XHZZ	AE		C	Bottom plate sheet
102	PSHEZ3575XHZZ	AK		C	CIS earth sheet
103	QCNW-351AXHZZ	AD		C	CIS earth cable
104	PBRS-2054SCZZ		N	C	Static brush
B2	XEBSD30P10000	AA		C	Screw(3x10)
B3	XBBSD30P06000	AA		C	Screw(3x6)
B4	XBPSN40P06K00	AA		C	Screw(4x6)
B5	XHBSD30P05000	AA		C	Screw(3x5)
B6	XHBSD30P06000	AA		C	Screw(3x6)
B7	XEBSD30P08000	AA		C	Screw(3x8)

[2] Top cover and sub frame



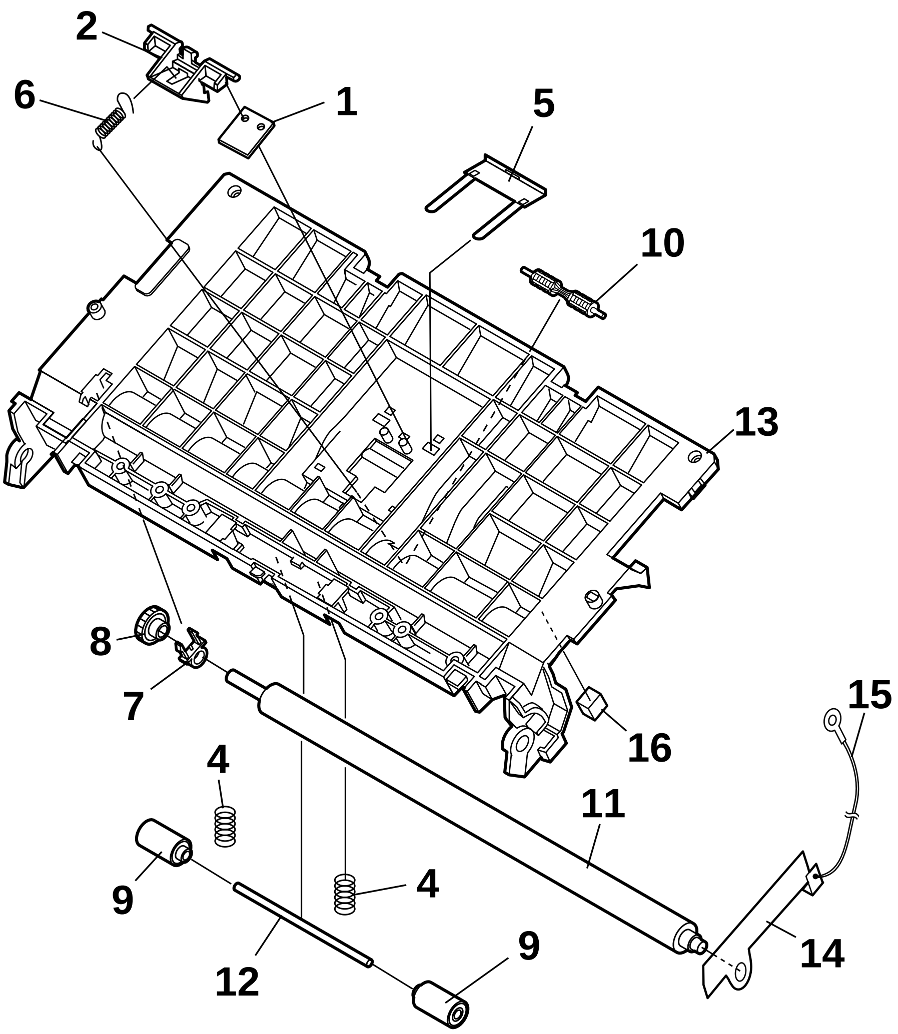
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[2] Top cover and sub frame					
1	GCOVA2403XHYE	AL		C	Top cover [465L/C]
	GCOVA2403XHYS	AL		C	Top cover [485LU]
2	JKNBP2091XHZZ	AC		C	Release knob
3	MSPRC2832XHZZ	AC		C	Hopper spring
4	NGERP2318XHZZ	AD		C	Pinion gear
5	PGIDM2533XHSE	AD		C	Hopper guide,left [465L/C]
	PGIDM2533XHSC	AD		C	Hopper guide,left [485LU]
6	PGIDM2534XHSE	AD		C	Hopper guide,right [465L/C]
	PGIDM2534XHSC	AD		C	Hopper guide,right [485LU]
7	MSPRD3065XHFJ	AB		C	PO pinch roller spring
8	NROLP2332XHZZ	AD		C	PO pinch roller
9	PGIDM2537XHZA	AF		C	PO guide
10	CROLR2434XH01	AH		C	PU roller ass'y
11	NROLR2408XHZZ	AD		C	PO roller
12	PGUMR2160XHZZ	AE		C	PO roller rubber
13	LBSHP2104XHZA	AC		C	Platen bearing,left
14	LBSHP2105XHZZ	AC		C	Platen bearing,right
15	LFRM-2199XHZB	AK		C	Sub frame
17	MLEVP2293XHZZ	AD		C	P-IN sensor lever
18	MSPRC3064XHFJ	AC		C	Tension spring
19	NGERH2441XHZZ	AC		C	PO gear
20	NGERH2442XHZZ	AC		C	Platen gear
21	NGERH2460XHZZ	AC		C	Tension gear
22	NROLR2409XHZZ	AW		C	Platen roller
23	NSFTM2311XHZZ	AG		C	Film guide shaft
24	NSFTP2304XHZZ	AD		C	PU shaft
25	LPLTP2997XHZZ	AD		C	Separate plate
26	LPLTP2998XHZZ	AF		C	Rotation plate
27	LPLTP3001XHYG	AH		C	RP release plate [465L/C]
	LPLTP3001XHYF	AF		C	RP release plate [485LU]
28	MSPRC3062XHFJ	AB		C	Separate spring
29	MSPRC3063XHFJ	AC		C	C-spring
30	PSEL-2015XHZZ	AB		C	RP pad
31	PSHEZ3293XHZZ	AH		C	Separate plate sheet
32	PSHEZ3431XHZZ	AC		C	TC sheet
33	PHOP-2101XHSE	AH		C	RP hopper [465L/C]
	PHOP-2101XHSC	AH		C	RP hopper [485LU]
34	MSPRD3105XHFJ	AC		C	P-IN sensor lever spring
35	PGIDM2535XHSC	AC		C	A4 paper guide [485LU]
B2	XEBSD30P10000	AA		C	Screw(3x10)
B6	LX-BZ2138XHZZ	AB		C	Screw

[3] Upper cabinet



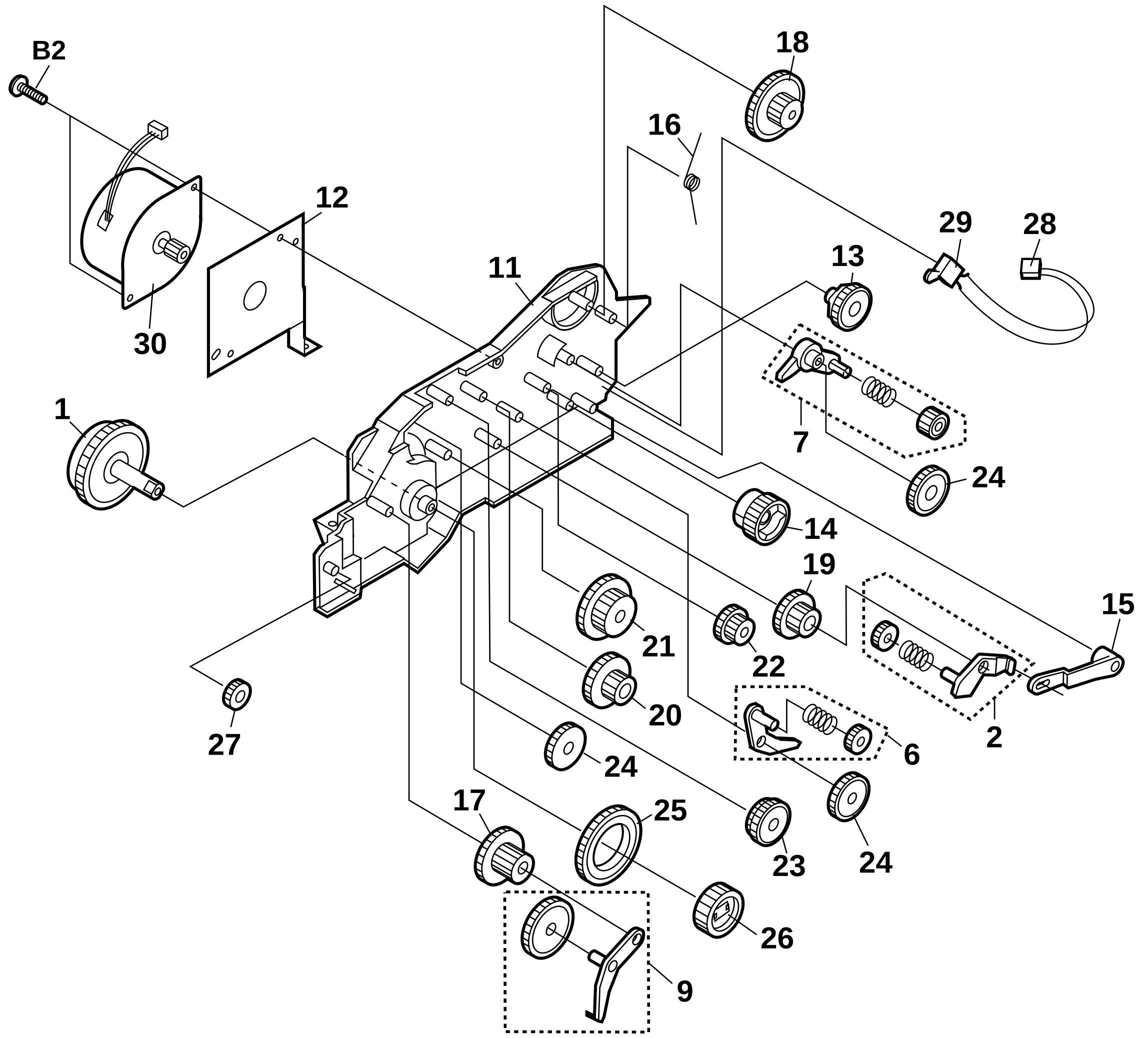
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[3] Upper cabinet						
1	GCABA2365XHSJ	AQ	N	D	Upper cabinet	[465L]
	GCABA2365XHSM		N	D	Upper cabinet	[465C]
	GCABA2365XHSQ		N	D	Upper cabinet	[485LU]
2	JBTN-2242XHSE	AG		C	12 key	[465L/C]
	JBTN-2242XHSC	AG		C	12 key	[485LU]
3	JBTN-2243XHSD	AE	N	C	Direct key	[465L/C]
	JBTN-2243XHSC	AD		C	Direct key	[485LU]
4	JBTN-2244XHSA	AD		C	Start key	
5	JBTN-2245XHSA	AD		C	Stop key	
6	JBTN-2246XHSE	AD		C	Mode key	[465L/C]
	JBTN-2246XHSC	AD		C	Mode key	[485LU]
7	DCEKP255CXH04	BC	N	E	Operation panel PWB unit	
8	QCNW-231AXHZZ	AG		C	Panel cable	
9	PSHEZ3544XHZZ	AD		C	Insulation sheet	
10	QSW-M2281XHZZ	AP		C	Document sensor	[ORGSNS]
11	QSW-M2282XHZZ	AP		C	Front sensor	[FRSNS]
12	QSW-K0005AWZZ	AC		C	Tact switch	[SW]
13	JBTN-2247XHSD	AD	N	C	TAD key	[465L/C]
	JBTN-2247XHSC	AE		C	TAD key	[485LU]
B1	XEBSD20P06000	AA		C	Screw(2x6)	
	(Unit)					
901	DCEKP253CXH13	BE	N	E	Operation panel unit	[465L]
	DCEKP253CXH17		N	E	Operation panel unit	[465C]
	DCEKP253CXH22		N	E	Operation panel unit	[485LU]

[4] Document guide upper



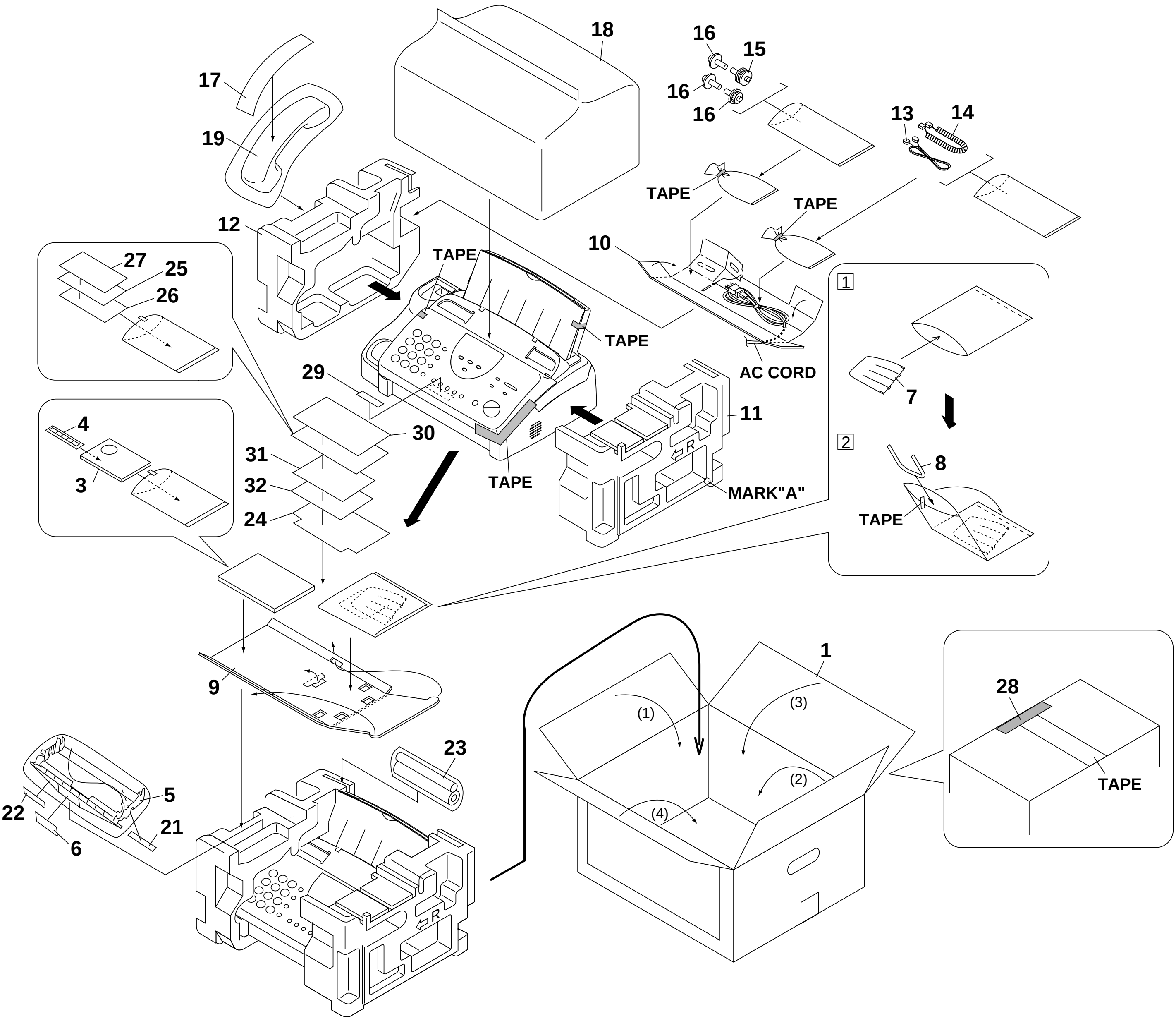
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[4] Document guide upper					
1	LPLTG2911XHZZ	AE		C	Separator rubber
2	LPLTP2908XHZZ	AE		C	Separator plate
4	MSPRC3071XHFJ	AB		C	Pinch roller spring
5	MSPRP3079XHFJ	AE		C	Paper feed spring
6	MSPRT3208XHZZ	AC		C	Separate spring
7	NBRGP2141XHZZ	AH		C	Transfer bearing
8	NGERH2445XHZZ	AB		C	Back roller gear
9	NROLP2334XHZA	AC		C	Pinch roller
10	NROLP2406XHZZ	AD		C	Guide roller
11	NROLR2411XHZZ	AV		C	Back roller
12	NSFTZ2257XHZZ	AG		C	Pinch roller shaft
13	PGIDM2536XHZZ	AK		C	Document guide upper
14	LPLTM3106XHZZ	AD		C	Roller earth plate
15	QCNW-350AXHZZ	AD		C	Roller earth cable
16	PCUSG2138XHZZ	AD		C	Earth gum

[5] Drive unit



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[5] Drive unit					
1	CGERH2459XH01	AM		C	Slip gear ass'y
2	CLEVP2298XH01	AC		C	Planet gear lever A ass'y
6	CLEVP2299XH01	AC		C	Planet gear lever B ass'y
7	CLEVP2300XH01	AC		C	Planet gear lever C ass'y
9	CLEVP2303XH01	AC		C	Planet gear lever D ass'y
11	LFRM-2200XHYA	AM		C	Drive unit frame
12	LPLTM2994XHFW	AE		C	Motor plate
13	MCAMP2025XHZZ	AB		C	Cam A
14	MCAMP2026XHZZ	AB		C	Cam B
15	MLEVP2301XHZZ	AB		C	Link lever
16	MSPRD3070XHFJ	AB		C	Cam hold spring
17	NGERH2280XHZZ	AC		C	Idler gear B
18	NGERH2311XHZZ	AD		C	Reduction gear C
19	NGERH2446XHZZ	AB		C	Reduction gear,1
20	NGERH2447XHZZ	AB		C	Reduction gear,2
21	NGERH2448XHZZ	AB		C	Reduction gear,3
22	NGERH2449XHZZ	AB		C	Reduction gear,4
23	NGERH2450XHZZ	AB		C	Reduction gear,5
24	NGERH2451XHZZ	AB		C	Idler gear,30Z
25	NGERH2452XHZZ	AB		C	Idler gear,52Z
26	NGERH2454XHZZ	AB		C	Take up gear
27	NGERH2461XHZZ	AB		C	Reduction gear,6
28	QCNW-4933XHZZ	AC		C	Cam switch cable
29	QSW-F2224SCZZ	AE		B	Cam switch
30	RMOTZ2145XHZZ	BA		B	Motor
B2	XEBSD30P10000	AA		C	Screw(3x10)

[6] Packing material & Accessories



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[6] Packing material & Accessories					
1	SPAKC320CXHTZ		N	D	Packing case [465L]
	SPAKC375CXHTZ		N	D	Packing case [465C]
	SPAKC400CXHTZ		N	D	Packing case [485LU]
3	TINSE4176XHTZ	AW	N	D	Operation manual [465L]
	TINSK4189XHTZ		N	D	Operation manual [465C]
	TINSS4204XHTZ		N	D	Operation manual [485LU]
4	TLABH480AXHZA	AD		D	Rapid key labels [465L]
	TLABH4751XHZZ	AC		D	Rapid key labels [465C]
	TLABH4936XHZZ	AD		D	Rapid key labels [485LU]
5	CPLTP3002XHB1	AK		E	Imaging film cartridge and label ass'y [465L]
	CPLTP3002XHB3	AK		E	Imaging film cartridge and label ass'y [465C]
	CPLTP3002XHB4	AK		E	Imaging film cartridge and label ass'y [485LU]
6	TLABH4752XHZZ	AB		D	Film set label
7	LPLTP3003XHSB	AG	N	C	Paper tray extension [465L/C]
	LPLTP3003XHSA	AH		C	Paper tray extension [485LU]
8	PHOP-2102XHZZ	AE		C	Original document support
9	SPAKA490AXHZZ	AD		D	Pad B [465C/485LU]
10	SPAKA489AXHZZ	AD		D	Pad A
11	SPAKA481AXHZA	AG		D	Packing add.,right
12	SPAKA480AXHZZ	AG		D	Packing add.,left
⚠ 13	QCNW-290ASCZZ	AE		C	Telephone line cord
⚠ 14	QCNW-289ASCOW	AG		C	Handset cord [465L/C]
⚠	QCNW-3976XHBG	AK		C	Handset cord [485LU]
15	NGERH2455XHZZ	AD		C	Imaging film gear A
16	NGERH2456XHZA	AC		C	Imaging film gear B
17	TLABM417CXHZZ		N	D	Pop label, handset [465L]
	TLABM403CXHZZ		N	D	Pop label, handset [485LU]
18	SPAKP3385SCZZ	AG		D	Vinyl cover
19	DUNTK369BXHLW	AQ	N	E	Handset [465L]
	DUNTK464BXHLW	AX		E	Handset [465C]
	DUNTK464BXHBG	AQ		E	Handset [485LU]
21	TLABH4853XHZZ	AC		D	Caution label 1 [465C]
	TLABH4937XHZZ	AZ		D	Caution label 1 [485LU]
22	TLABH220AXHZZ	AB		D	Caution label 2 [465C]
	TLABH212AXHZZ	AU		D	Caution label 2 [485LU]
23	PRBNN2015SCZZ	AQ		S	Imaging film(Initial starter film 10m)
24	TCADZ3142XHZZ		N	D	Pop card [465C]
25	TCADZ2889XHZZ	AE		D	Open LCR information and registration sheet [465L]
26	TCADZ2891XHZZ	AF		D	Registration card [465L]
27	TCADZ3045XHZZ	AD		D	Fax transmission sheet [465L]
28	TLABH447BXHZZ	AC		D	Caution label,packing case [465L]
29	TLABM342BXHZZ	AD		D	Pop label,operation panel [465L]
30	TCADH3090XHZZ	AF	N	D	Quick setup guide [465L]
31	TCADZ3167XHZZ		N	D	Attention sheet A [465C]
32	TCADZ3168XHZZ		N	D	Attention sheet B [465C]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[7] Control PWB unit						
1	UBATL2049SCZZ	AF		B	Battery(CR2032T23)	[BAT1]
2	VCEAGA0JW227M	AD		C	Capacitor(6.3WV 220µF)	[C1]
3	VCEAGA1EW476M	AA		C	Capacitor(50WV 47µF)	[C2]
4	VCEAGA0JW227M	AD		C	Capacitor(6.3WV 220µF)	[C3]
5	VCEAGA1HW106M	AA		C	Capacitor(50WV 10µF)	[C6]
6	VCEAGA1HW106M	AA		C	Capacitor(50WV 10µF)	[C7]
7	VCEAGA1HW106M	AA		C	Capacitor(50WV 10µF)	[C8]
8	VCEAGA0JW227M	AD		C	Capacitor(6.3WV 220µF)	[C9]
9	VCEAGA1HW106M	AA		C	Capacitor(50WV 10µF)	[C10]
10	VCEAGA1HW107M	AA		C	Capacitor(50WV 100µF)	[C11]
11	VCEAGA1HW107M	AA		C	Capacitor(50WV 100µF)	[C12]
12	VCEAGA1HW226M	AB		C	Capacitor(50WV 22µF)	[C13]
13	VCEAGA1EW476M	AA		C	Capacitor(50WV 47µF)	[C14]
14	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C100]
15	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C103]
16	VCKYTV1HF104Z	AA		C	Capacitor(50WV 0.1µF)	[C105]
17	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C107]
18	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C109]
19	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C110]
20	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C111]
21	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1µF)	[C115]
22	VCKYCY1HB221K	AB		C	Capacitor(50WV 220PF)	[C116]
23	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C117]
24	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C118]
25	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C119]
26	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000pF)	[C120]
27	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C122]
28	VCKYCY1HB472K	AA		C	Capacitor(50WV 4700PF)	[C123]
29	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C124]
30	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[C125]
31	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C126]
32	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C127]
33	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C128]
34	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C129]
35	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C130]
36	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C131]
37	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C132]
38	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C133]
39	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C134]
40	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C136]
41	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C137]
42	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C138]
43	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01µF)	[C140]
44	VCCCCY1HH180J	AA		C	Capacitor(50WV 18PF)	[C141]
45	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1µF)	[C142]
46	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1µF)	[C143]
47	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1µF)	[C144]
48	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1µF)	[C145]
49	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1µF)	[C146]
50	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C147]
51	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C148]
52	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C149]
53	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C150]
54	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C151]
55	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C152]
56	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C153]
57	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C155]
58	VCCCCY1HH101J	AA		C	Capacitor(50WV 100PF)	[C156]
59	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C159]
60	VCCCCY1HH150J	AB		C	Capacitor(50WV 15PF)	[C160]
61	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1µF)	[C161]
62	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C162]
63	VCCCCY1HH220J	AA		C	Capacitor(50WV 22PF)	[C163]
64	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1µF)	[C164]
65	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1µF)	[C165]
66	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1µF)	[C167]
67	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[C169]
68	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[C171]
69	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1µF)	[C172]
70	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C173]
71	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C174]
72	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C175]
73	VCKYCY1CB104K	AB		C	Capacitor(16WV 0.1µF)	[C176]
74	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1µF)	[C178]
75	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1µF)	[C179]
76	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1µF)	[C181]
77	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1µF)	[C182]
78	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1µF)	[C183]
79	VCKYCY1HB103K	AA		C	Capacitor(50WV 0.01µF)	[C184]
80	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1µF)	[C185]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[7] Control PWB unit						
81	VCCCCY1HH220J	AA		C	Capacitor(50WV 22PF)	[C186]
82	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C187]
83	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C188]
84	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[C189]
85	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[C192]
86	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C194]
87	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000PF)	[C195]
88	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C196]
89	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C197]
90	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C198]
91	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C199]
92	VCKYCY1CB104K	AB		C	Capacitor(16WV 0.1μF)	[C201]
93	VCKYCY1CB104K	AB		C	Capacitor(16WV 0.1μF)	[C204]
94	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C209]
95	VCKYCY1AF105Z	AC		C	Capacitor(10WV 1μF)	[C210]
96	VCKYTV1HF104Z	AA		C	Capacitor(50WV 0.1μF)	[C216]
97	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1μF)	[C217]
98	QCNCM7014SC0G	AB		C	Connector(7pin)	[CNCIS]
99	QCNCM2442SC0B	AB		C	Conector(2pin)	[CNCSW]
100	QCNCM2575SC1D	AC		C	Connector(14pin)	[CNLIUA]
101	QCNCM7014SC0F	AB		C	Connector(6pin)	[CNMT]
102	QCNCM7014SC1E	AC		C	Connector(15pin)	[CNPN]
103	QCNCM2575SC0H	AF		C	Connector(8pin)	[CNPW]
104	QCNCM2401SC0B	AA		C	Connector(2pin)	[CNSP]
105	QCNCM7014SC1F	AD		C	Connector(16pin)	[CNTH]
106	VHE1N4748A/-1	AC		B	Zener diode(1N4748)	[D1]
107	VHD1SS355//-1	AB		B	Diode(1SS355)	[D100]
108	VHD1SS355//-1	AB		B	Diode(1SS355)	[D101]
109	VHD1SS355//-1	AB		B	Diode(1SS355)	[D102]
110	VHD1SS355//-1	AB		B	Diode(1SS355)	[D103]
111	VHDHRW0202B-1	AD		B	Diode(HRW0202B)	[D104]
112	VHD02DZ5R1Y-1	AC		B	Zener diode(02DZ5.1Y)	[D105]
113	QFS-P2010SCZZ	AD		B	IC protector(KAB2402)	[FU100]
114	VHIW24L257S7L	AC		B	IC(W24L257S-70LL)	[IC2]
115	RH-IX2168SCZZ	BB		B	IC(MSM51V4800E)	[IC3]
116	VHIKID65001AP	AE	N	B	IC(KID65001AP)	[IC4]
117	VHINJM2113M-1	AG		B	IC(NJM2113M)	[IC5]
118	VHIKM29W040-1	AV		B	IC(K9F4008W0A)	[IC6]
119	QSOCZ2051SC32	AC		C	IC socket(32pin)	[IC7]
	VHI27020FQM0B		N	B	IC,EPROM(2MB)	[IC7][465L]
	VHI27020FQN0B		N	B	IC,EPROM(2MB)	[IC7][465C]
	VHI27020FQP0A		N	B	IC,EPROM(2MB)	[IC7][485LU]
120	RH-IX2232XHZZ	AK	N	B	IC(74HCT4051D)	[IC8]
121	VHISCE114V/-1	BQ	N	B	IC(SCE114V)(Within IC10 and IC11 pair)	[IC10]
122	VHISCE114V/-1	BQ	N	B	IC(20415)(Within IC10 and IC11 pair)	[IC11]
123	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[L100]
124	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[L105]
125	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[L107]
126	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[L108]
127	VRS-TS2AD150J	AA		C	Resistor(1/10W 15Ω ±5%)	[L109]
128	RCILZ2145XHZZ	AF		C	Coil(HM601)	[L110]
129	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[L111]
130	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[L112]
131	VHPSG206S//-1	AG		B	Photo transistor(SG206S)	[PI1]
132	VSKTA1504GR-1	AC		B	Transistor(KTA1504GR)	[Q100]
133	VSKRC106S//-1	AD		B	Transistor(KRC106S)	[Q103]
134	VSKRC102S//-1		N	B	Transistor(KRC102S)	[Q104]
135	VSKRC102S//-1		N	B	Transistor(KRC102S)	[Q105]
136	VSKRC102S//-1		N	B	Transistor(KRC102S)	[Q106]
137	VS2SC2412KS-1	AB		B	Transistor(2SC2412K)	[Q108]
138	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R100]
139	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R101]
140	VRS-CY1JB300J	AD		C	Resistor(1/16W 30Ω ±5%)	[R102]
141	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R103]
142	VRS-CY1JB512J	AA		C	Resistor(1/16W 5.1KΩ ±5%)	[R104]
143	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R105]
144	VRS-CY1JB223J	AA		C	Resistor(1/16W 22KΩ ±5%)	[R109]
145	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R110]
146	VRS-CY1JB154J	AA		C	Resistor(1/16W 150KΩ ±5%)	[R111]
147	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R112]
148	VRS-CY1JB623J	AA		C	Resistor(1/16W 62KΩ ±5%)	[R113]
149	VRS-CY1JB153J	AA		C	Resistor(1/16W 15KΩ ±5%)	[R114]
150	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%)	[R115]
151	VRS-CY1JB164J	AA		C	Resistor(1/16W 160KΩ ±5%)	[R116]
152	VRS-CY1JB334J	AA		C	Resistor(1/16W 330KΩ ±5%)	[R117]
153	VRS-CY1JB125J	AA		C	Resistor(1/16W 1MΩ ±5%)	[R118]
154	VRS-CY1JB474J	AA		C	Resistor(1/16W 470KΩ ±5%)	[R119]
155	VRS-CY1JB754J	AB		C	Resistor(1/16W 750KΩ ±5%)	[R120]
156	VRS-CY1JB104J	AA		C	Resistor(1/16W 100KΩ ±5%)	[R121]
157	VRS-CY1JB302J	AA		C	Resistor(1/16W 3KΩ ±5%)	[R123]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[7] Control PWB unit						
158	VRS-CY1JB153J	AA		C	Resistor(1/16W 15KΩ ±5%)	[R124]
159	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R125]
160	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R126]
161	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R128]
162	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R129]
163	VRS-CY1JB104J	AA		C	Resistor(1/16W 100KΩ ±5%)	[R132]
164	VRS-CY1JB153J	AA		C	Resistor(1/16W 15KΩ ±5%)	[R133]
165	VRS-CY1JB203J	AA		C	Resistor(1/16W 20KΩ ±5%)	[R134]
166	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R136]
167	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R137]
168	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R138]
169	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R139]
170	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R140]
171	VRS-CY1JB474J	AA		C	Resistor(1/16W 470KΩ ±5%)	[R141]
172	VRS-CY1JB121J	AA		C	Resistor(1/16W 120Ω ±5%)	[R142]
173	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R145]
174	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R146]
175	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R147]
176	VRS-CY1JB105J	AA		C	Resistor(1/16W 1MΩ ±5%)	[R148]
177	VRS-CY1JB151J	AA		C	Resistor(1/16W 150Ω ±5%)	[R152]
178	VRS-CY1JB223J	AA		C	Resistor(1/16W 22KΩ ±5%)	[R160]
179	VRS-CY1JB203J	AA		C	Resistor(1/16W 20KΩ ±5%)	[R161]
180	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R165]
181	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R166]
182	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R167]
183	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R168]
184	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%)	[R171]
185	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R172]
186	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%)	[R173]
187	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R174]
188	VRS-CY1JB106J	AA		C	Resistor(1/16W 10MΩ ±5%)	[R177]
189	VRS-CY1JB224J	AA		C	Resistor(1/16W 220KΩ ±5%)	[R179]
190	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R180]
191	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R182]
192	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R183]
193	VRS-CY1JB113J	AA		C	Resistor(1/16W 11KΩ ±5%)	[R184]
194	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R186]
195	VRS-CY1JB222J	AA		C	Resistor(1/16W 2.2KΩ ±5%)	[R188]
196	VRS-CY1JB471J	AA		C	Resistor(1/16W 470Ω ±5%)	[R189]
197	VRS-CY1JB271J	AA		C	Resistor(1/16W 270Ω ±5%)	[R196]
198	VRS-CY1JB471J	AA	N	C	Resistor(1/16W 470Ω ±5%)	[R197]
199	VRS-CY1JB562J	AA		C	Resistor(1/16W 5.6KΩ ±5%)	[R198]
200	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R199]
201	VRS-CY1JB393J	AA		C	Resistor(1/16W 39KΩ ±5%)	[R200]
202	VRS-CY1JB104J	AA		C	Resistor(1/16W 100KΩ ±5%)	[R201]
203	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R202]
204	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R203]
205	VRS-CY1JB513J	AA		C	Resistor(1/16W 51KΩ ±5%)	[R205]
206	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%)	[R206]
207	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R208]
208	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R210]
209	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R213]
210	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R220]
211	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R221]
212	VRS-CY1JB103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R222]
213	RR-TZ3029SCZZ	AB		C	Block resistor(1KΩx4)	[RA9]
214	RR-TZ3018SCZZ	AC		C	Block resistor(470Ωx4)	[RA11]
215	RR-TZ3017SCZZ	AC		C	Block resistor(270Ωx4)	[RA12]
216	RR-TZ3017SCZZ	AC		C	Block resistor(270Ωx4)	[RA13]
217	RR-TZ3018SCZZ	AC		C	Block resistor(470Ωx4)	[RA14]
218	RR-TZ3018SCZZ	AC		C	Block resistor(470Ωx4)	[RA15]
219	VHI62FP332P-1	AF		B	IC(XC62FP3302P)	[REG1]
220	RRLYD3130SCZZ	AN		B	Relay(OJE-SH-124DM)	[RY1]
221	QSW-M2259XHZZ	AF		B	Cover switch	[SW1]
222	RCRSQ2157SCZZ	AF		B	Crystal(32.256MHz)	[X1]
223	RCRSB0297AFZZ	AD		B	Crystal(32.768kHz)	[X2]
	(Unit)					
901	DCEKC584PXHZZ	BQ	N	E	Control PWB unit(Within ROM)	[465L]
	DCEKC687PXHZZ		N	E	Control PWB unit(Within ROM)	[465C]
	DCEKC886PXHZZ		N	E	Control PWB unit(Within ROM)	[485LU]
[8] TEL/LIU PWB unit						
1	VHVRA391PV6-1	AE		B	Varistor(RA391PV6)	[AR2]
2	RC-FZ3024SCZZ	AG		C	Capacitor(250WV 0.82µF)	[C4]
3	VCEAGA1HW226M	AB		C	Capacitor(50WV 22µF)	[C5]
4	VCEAGA1HW106M	AA		C	Capacitor(50WV 10µF)	[C6]
5	VCEAGA1HW475M	AA		C	Capacitor(50WV 4.7µF)	[C7]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[8] TEL/LIU PWB unit						
6	VCEAGA1HW226M	AB		C	Capacitor(50WV 22µF)	[C9]
7	VCEAGA1HW226M	AB		C	Capacitor(50WV 22µF)	[C11]
8	VCEAGA1HW226M	AB		C	Capacitor(50WV 22µF)	[C12]
9	VCEAGA1HW226M	AB		C	Capacitor(50WV 22µF)	[C13]
10	VCKYPA1HB103K	AA		C	Capacitor(50WV 0.01µF)	[C15]
11	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF)	[C100]
12	VCKYCY1HB222K	AA		C	Capacitor(50WV 2200PF)	[C104]
13	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C105]
14	VCKYCY1EB393K	AB		C	Capacitor(25WV 0.039µF)	[C106]
15	VCKYTQ1HB102K	AA		C	Capacitor(50WV 1000PF)	[C108]
16	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000pF)	[C111]
17	VCKYCY1HB392K	AA		C	Capacitor(50WV 3900PF)	[C112]
18	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000pF)	[C113]
19	VCCCCY1HH330J	AA		C	Capacitor(50WV 33PF)	[C114]
20	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF)	[C115]
21	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1µF)	[C117]
22	VCKYCY1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C118]
23	VCCCCY1HH221J	AA		C	Capacitor(50WV 220PF)	[C119]
24	VCKYCY1HB102K	AA		C	Capacitor(50WV 1000pF)	[C120]
25	VCCCCY1HH221J	AA		C	Capacitor(50WV 220PF)	[C121]
26	VCKYTV1HF104Z	AA		C	Capacitor(50WV 0.1µF)	[C122]
27	VCKYTV1HF104Z	AA		C	Capacitor(50WV 0.1µF)	[C123]
28	VCCCCY1HH330J	AA		C	Capacitor(50WV 33PF)	[C124]
29	VCKYTV1HF104Z	AA		C	Capacitor(50WV 0.1µF)	[C126]
30	VCKYCY1HB821K	AA		C	Capacitor(50WV 820PF)	[C127]
31	RRLYD3433XHZZ	AH		B	Relay(OUAZ-SH-124DZ)	[CML1]
32	QJAKZ2079XH0D	AD		C	Jack	[CNHJ]
33	QCNCW2509SC1D	AF		C	Connector(14pin)	[CNLIUA]
34	QJAKZ2069SCBB	AG		C	Jack	[CNLNJ/TLJ]
35	VHDDSS133//-1	AA		B	Diode(1SS133)	[D1]
36	VHDDSS133//-1	AA		B	Diode(1SS133)	[D2]
37	QSW-Z2263XHZZ	AG		B	Hook switch	[HOOK SW]
38	VHINJM2904M-2	AG		B	IC(NJM2904)	[IC101]
39	VHINJM2904M-2	AG		B	IC(NJM2904)	[IC102]
40	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[JP100]
41	VHPPC814X//-1	AE		B	Photo coupler(PC814X)	[PC1]
42	VHPTLP521-1BL	AE		B	Photo coupler(TLP521)	[PC5]
43	VHPSG206S//-1	AG		B	Photo transistor(SG206S)	[PIN]
44	VS2SC2412KR-1	AD		B	Transistor(2SC2412KR)	[Q100]
45	VSDTC143ZK/-1	AD		B	Transistor(DTC143ZK)	[Q101]
46	VSDTC143ZK/-1	AD		B	Transistor(DTC143ZK)	[Q104]
47	VRD-HT2HY223J	AA		C	Resistor(1/2W 22KΩ ±5%)	[R3]
48	VRD-HT2EY910J	AA		C	Resistor(1/4W 91Ω ±5%)	[R4]
49	VRS-RE3AA102J	AA		C	Resistor(1W 1KΩ ±5%)	[R5]
50	VRD-HT2EY300J	AA		C	Resistor(1/4W 30Ω ±5%)	[R6]
51	VRS-TS2AD223J	AA		C	Resistor(1/10W 22KΩ ±5%)	[R101]
52	VRS-CY1JB102J	AA		C	Resistor(1/16W 1KΩ ±5%)	[R105]
53	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%)	[R110]
54	VRS-CY1JB203J	AA		C	Resistor(1/16W 20KΩ ±5%)	[R111]
55	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R112]
56	VRS-CY1JB512J	AA		C	Resistor(1/16W 5.1KΩ ±5%)	[R113]
57	VRS-CY1JB152J	AA		C	Resistor(1/16W 1.5KΩ ±5%)	[R114]
58	VRS-CY1JB621J	AA		C	Resistor(1/16W 620Ω ±5%)	[R116]
59	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%)	[R118]
60	VRS-CY1JB203J	AA		C	Resistor(1/16W 20KΩ ±5%)	[R124]
61	VRS-CY1JB433J	AA		C	Resistor(1/16W 43KΩ ±5%)	[R125]
62	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R126]
63	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R127]
64	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R128]
65	VRS-CY1JB472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R129]
66	VRSTS2AD8662F	AA		C	Resistor(1/10W 86.6KΩ ±1%)	[R130]
67	VRS-CY1JB203J	AA		C	Resistor(1/16W 20KΩ ±5%)	[R131]
68	VRS-CY1JB301J	AA		C	Resistor(1/10W 300Ω ±5%)	[R132]
69	VRS-CY1JB203J	AA		C	Resistor(1/16W 20KΩ ±5%)	[R134]
70	VRS-CY1JB000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R136]
71	VRS-CY1JB822J	AA		C	Resistor(1/16W 8.2KΩ ±5%)	[R137]
72	VRS-CY1JB393J	AA		C	Resistor(1/16W 39KΩ ±5%)	[R138]
73	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R139]
74	VRS-CY1JB224J	AA		C	Resistor(1/16W 220KΩ ±5%)	[R140]
75	VRS-CY1JB153J	AA		C	Resistor(1/16W 15KΩ ±5%)	[R141]
76	VRS-CY1JB332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R142]
77	VRS-TS2AD102J	AA		C	Resistor(1/10W 1KΩ ±5%)	[R143]
78	VRS-CY1JB473J	AA		C	Resistor(1/16W 47KΩ ±5%)	[R144]
79	RTRNI2164XHZZ	AG		B	Transformer(I2164)	[T1]
80	VHVERZV5D471/	AC		B	Varistor(ERZVA5D471)	[VA1]
81	VHVERZV5D471/	AC		B	Varistor(ERZVA5D471)	[VA2]
82	VHEHZ2C1///-1	AA		B	Zener diode(HZ2C1)	[ZD3]
83	VHEHZ2C1///-1	AA		B	Zener diode(HZ2C1)	[ZD4]
84	VHEHZ27-1//-1	AB		B	Zener diode(HZ27C)	[ZD6]
85	VHEHZ2C1///-1	AA		B	Zener diode(HZ2C1)	[ZD9]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[8] TEL/LIU PWB unit					
86	VHEHZ2C1///-1	AA		B	Zener diode(HZ2C1) [ZD10]
	(Unit)				
901	DCEKL254CXH06	BA	N	E	TEL/LIU PWB unit
[9] Power supply PWB unit					
1	0CBUGFM224KR/	AF		C	Capacitor(RE224-C) [C1]
2	0CBUGAL151SM/	AL		C	Capacitor(KMF200VB-150M 18x25) [C2]
3	0CBUGCU471JE/	AD		C	Capacitor(DE1105-SL471J1K) [C3]
4	0CBUGFF222BQ/	AC		C	Capacitor(AMZ-222K50) [C4]
5	0CBUGFF472KX/	AC		C	Capacitor(ECQB1H472JM4) [C5]
6	0CBUGCM472BJ/	AF		C	Capacitor(DE1610-E472M-KX) [C7]
7	0CBUGAE331TS/	AH		C	Capacitor(LKJ35VB330(M)) [C8]
8	0CBUGAE331TR/	AF		C	Capacitor(LKJ16VB330(M)) [C10]
9	0CBUGCD104AP/	AD		C	Capacitor(DD306-F104Z25) [C11]
10	0CBUGFF104BQ/	AD		C	Capacitor(AMZ-104K50) [C12]
11	0CBUGCD104AP/	AD		C	Capacitor(DD306-F104Z25) [C14]
12	0CBUGFF102BQ/	AD		C	Capacitor(AMZ-102K50) [C17]
13	0CBUGFF152BQ/	AD		C	Capacitor(AMZ-152K50) [C20]
14	0CBUGFF102BQ/	AD		C	Capacitor(AMZ-102K50) [C21]
15	0CBUGFF331BQ/	AD		C	Capacitor(AMZ-331K50) [C22]
16	0CBPCZ0273ZZ/	AH		C	Connector(IMSA-9110S-08L) [CN1]
17	0CBPKZ0194ZZ/	AC		C	Base post ass'y(B 2P3-VH) [CN2]
18	0CBUBC0125DK/	AD		B	Diode(ERA15-06) [D1]
19	0CBUBC0125DK/	AD		B	Diode(ERA15-06) [D2]
20	0CBUBC0125DK/	AD		B	Diode(ERA15-06) [D3]
21	0CBUBC0125DK/	AD		B	Diode(ERA15-06) [D4]
22	0CBUBA0011AL/	AD		B	Diode(1SS133) [D5]
23	0CBUBC0336AZ/	AL		B	Diode(S3L20U-4004P15) [D7]
24	0CBUBC0302AZ/	AE		B	Diode(SR140) [D8]
25	0CBPJCSX2501/	AH		A	Current fuse(23702.5 ME600) [F1]
26	0CBPZZ0906ZZ/	AH		A	Circuit protect chip(CCP2E100) [F3]
27	0CBUCB0196AZ/	AR		B	IC(BA178M05T) [IC1]
28	0CBUKZ0960ZZ/	AK		C	Filter(TLF14CB 103 0R7) [L1]
29	0CBLRZ6581ZN/	AQ		C	Heat sink(J7E41-5001CT) [MT1]
30	0CBLRZ6686ZQ/	AQ		C	Heat sink(MN917-5001AT) [MT2]
31	0CBUDC0062MZ/	AG		B	Photo coupler(PS2501-1L) [PC1]
32	0CBUAG0161BZ/	AQ		B	FET(FS5KM-14) [Q1]
33	0CBUAC0264AZ/	AD		B	Transistor(2SC1741AS QR) [Q2]
34	0CBUAC0034EZ/	AE		B	Transistor(2SC1740S) [Q3]
35	0CBUAC0034EZ/	AE		B	Transistor(2SC1740S) [Q4]
36	0CBUEEC105CF/	AC		C	Resistor(RD50SS-105J) [R1]
37	0CBUEEB824CS/	AC		C	Resistor(RD16S-824J) [R2]
38	0CBUEEB184CS/	AC		C	Resistor(RD16S 184J) [R3]
39	0CBUEEB331CS/	AC		C	Resistor(RD16S 331J) [R4]
40	0CBUEEB562CS/	AC		C	Resistor(RD16S 562J) [R5]
41	0CBUEEB473CS/	AC		C	Resistor(RD16S 473J) [R6]
42	0CBUEEB181CS/	AC		C	Resistor(RD16S 181J) [R7]
43	0CBUEEB473CS/	AC		C	Resistor(RD16S 473J) [R8]
44	0CBUEEB471CS/	AC		C	Resistor(RD16S 471J) [R9]
45	0CBUEFDR15DB/	AE		C	Resistor(RSMF1TBR15G) [R10]
46	0CBUEEB271CS/	AC		C	Resistor(RD16S 271J) [R13]
47	0CBUEEB152CS/	AC		C	Resistor(RD16S 152J) [R14]
48	0CBUEEB334CS/	AC		C	Resistor(RD16S 334J) [R15]
49	0CBUEEB682CS/	AC		C	Resistor(RD16S 682J) [R16]
50	0CBUEEB222CS/	AC		C	Resistor(RD16S 222J) [R17]
51	0CBUEEB182CS/	AC		C	Resistor(RD16S-182J) [R18]
52	0CBUEEB332CF/	AC		C	Resistor(RD50SS 332J) [R21]
53	0CBUEEB332CF/	AC		C	Resistor(RD50SS 332J) [R22]
54	0CBUEEB101CS/	AC		C	Resistor(RD16S 101J) [R23]
55	0CB829585033/	BE		B	Transformer(PTTN103-KTT) [T1]
56	0CBUEZ0528ZZ/	AD		B	Varistor(ERZV07D241-CS) [V1]
57	0CBUFBA471CB/	AD		B	Variable resistor(EVN DJA A03 BQ2(471)) [VR1]
58	0CBUBDBE4R3C/	AD		B	Zener diode(RD4.3ESAB2) [ZD2]
59	0CBUBDAE300D/	AD		B	Zener diode(RD30FB3) [ZD4]
60	0CBUBDAC6R2C/	AC		B	Zener diode(RD6.2ESAB2) [ZD5]
	(Unit)				
901	RDENT2155XHZZ	BD		E	Power supply PWB unit
[10] Operation panel PWB unit					
1	QSW-K0005AWZZ	AC		C	Tact switch [SW]
2	QSW-M2281XHZZ	AP		C	Document sensor [ORGSNS]
3	QSW-M2282XHZZ	AP		C	Front sensor [FRSNS]
	(Unit)				
901	DCEKP255CXH04	BC	N	E	Operation panel PWB unit

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PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
[C]				
CCNW-4938XH01	1-9	AL		C
CGERH2444XHY1	1-10	AF		C
CGERH2459XH01	5-1	AM		C
CLEVP2298XH01	5-2	AC		C
CLEVP2299XH01	5-6	AC		C
CLEVP2300XH01	5-7	AC		C
CLEVP2303XH01	5-9	AC		C
CPLTP3002XHB1	6-5	AK		E
CPLTP3002XHB3	6-5	AK		E
CPLTP3002XHB4	6-5	AK		E
CROLR2434XH01	2-10	AH		C
[D]				
DCEKC584PXHZZ	1-44	BQ	N	E
″	7-901	BQ	N	E
DCEKC687PXHZZ	1-44		N	E
″	7-901		N	E
DCEKC886PXHZZ	1-44		N	E
″	7-901		N	E
DCEKL254CXH06	1-45	BA	N	E
″	8-901	BA	N	E
DCEKP253CXH13	1-1	BE	N	E
″	3-901	BE	N	E
DCEKP253CXH17	1-1		N	E
″	3-901		N	E
DCEKP253CXH22	1-1		N	E
″	3-901		N	E
DCEKP255CXH04	3-7	BC	N	E
″	10-901	BC	N	E
DUNTK369BXHLW	6-19	AQ	N	E
DUNTK464BXHBG	6-19	AQ		E
DUNTK464BXHLW	6-19	AX		E
[G]				
GCABA2365XHSJ	3-1	AQ	N	D
GCABA2365XHSM	3-1		N	D
GCABA2365XHSQ	3-1		N	D
GCABB2325XHSH	1-14	AZ		D
GCABB2325XHSJ	1-14	BA		D
GCABB2325XHSM	1-14	BA		D
GCOVA2403XHYE	2-1	AL		C
GCOVA2403XHYS	2-1	AL		C
GLEGG2068XHZZ	1-86	AC		C
[H]				
HPNLH2391XHSU	1-85	AG	N	D
HPNLH2391XHS8	1-85		N	D
[J]				
JBTN-2242XHSC	3-2	AG		C
JBTN-2242XHSE	3-2	AG		C
JBTN-2243XHSC	3-3	AD		C
JBTN-2243XHSD	3-3	AE	N	C
JBTN-2244XHSA	3-4	AD		C
JBTN-2245XHSA	3-5	AD		C
JBTN-2246XHSC	3-6	AD		C
JBTN-2246XHSE	3-6	AD		C
JBTN-2247XHSC	3-13	AE		C
JBTN-2247XHSD	3-13	AD	N	C
JKNBP2091XHZZ	2-2	AC		C
[L]				
LANGF2817XHFW	1-15	AF		C
LBSHP2088AXZZ	1-16	AC		C
LBSHP2104XHZA	2-13	AC		C
LBSHP2105XHZZ	2-14	AC		C
LFRM-2198XHZZ	1-31	AK		C
LFRM-2199XHZB	2-15	AK		C
LFRM-2200XHYA	5-11	AM		C
LPLTG2911XHZZ	4-1	AE		C
LPLTM2994XHFW	5-12	AE		C
LPLTM2995XHFW	1-46	AS		C
LPLTM3106XHZZ	4-14	AD		C
LPLTP2908XHZZ	4-2	AE		C
LPLTP2997XHZZ	2-25	AD		C
LPLTP2998XHZZ	2-26	AF		C
LPLTP3001XHYF	2-27	AF		C
LPLTP3001XHYG	2-27	AH		C
LPLTP3003XHSA	6-7	AH		C
LPLTP3003XHSB	6-7	AG	N	C
LX-BZ2138XHZZ	2-B6	AB		C
[M]				
MCAMP2025XHZZ	5-13	AB		C
MCAMP2026XHZZ	5-14	AB		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
MLEVP2290XHZZ	1-17	AC		C
MLEVP2293XHZZ	2-17	AD		C
MLEVP2294XHYZ	1-19	AD		C
MLEVP2295XHZZ	1-20	AD		C
MLEVP2296XHZZ	1-21	AD		C
MLEVP2297XHZA	1-4	AC		C
MLEVP2301XHZZ	5-15	AB		C
MLEVP2302XHZZ	1-84	AC		C
MSPRC2832XHZZ	2-3	AC		C
MSPRC3057XHFJ	1-47	AC		C
MSPRC3059XHFJ	1-34	AC		C
MSPRC3061XHFJ	1-35	AB		C
MSPRC3062XHFJ	2-28	AB		C
MSPRC3063XHFJ	2-29	AC		C
MSPRC3064XHFJ	2-18	AC		C
MSPRC3071XHFJ	4-4	AB		C
MSPRC3102XHFJ	1-33	AC		C
MSPRC3103XHFJ	1-32	AC		C
MSPRD3065XHFJ	2-7	AB		C
MSPRD3070XHFJ	5-16	AB		C
MSPRD3082XHFJ	1-22	AC		C
MSPRD3104XHFJ	1-92	AC		C
MSPRD3105XHFJ	2-34	AC		C
MSPRP3054XHFJ	1-24	AD		C
MSPRP3055XHFJ	1-25	AD		C
MSPRP3079XHFJ	4-5	AE		C
MSPRT3069XHFJ	1-5	AB		C
MSPRT3208XHZZ	4-6	AC		C
[N]				
NBRGP2141XHZZ	4-7	AH		C
NGERH2280XHZZ	5-17	AC		C
NGERH2311XHZZ	5-18	AD		C
NGERH2441XHZZ	2-19	AC		C
NGERH2442XHZZ	2-20	AC		C
NGERH2445XHZZ	1-26	AB		C
″	4-8	AB		C
NGERH2446XHZZ	5-19	AB		C
NGERH2447XHZZ	5-20	AB		C
NGERH2448XHZZ	5-21	AB		C
NGERH2449XHZZ	5-22	AB		C
NGERH2450XHZZ	5-23	AB		C
NGERH2451XHZZ	5-24	AB		C
NGERH2452XHZZ	5-25	AB		C
NGERH2454XHZZ	5-26	AB		C
NGERH2455XHZZ	6-15	AD		C
NGERH2456XHZA	6-16	AC		C
NGERH2460XHZZ	2-21	AC		C
NGERH2461XHZZ	5-27	AB		C
NGERP2318XHZZ	2-4	AD		C
NROLP2332XHZZ	2-8	AD		C
NROLP2334XHZA	4-9	AC		C
NROLP2406XHZZ	4-10	AD		C
NROLR2375XHZZ	1-6	AL		C
NROLR2408XHZZ	2-11	AD		C
NROLR2409XHZZ	2-22	AW		C
NROLR2410XHZZ	1-27	AP		C
NROLR2411XHZZ	4-11	AV		C
NSFTM2311XHZZ	1-28	AG		C
″	2-23	AG		C
NSFTP2302XHZZ	1-7	AD		C
NSFTP2304XHZZ	2-24	AD		C
NSFTZ2257XHZZ	4-12	AG		C
[P]				
PBRS-2054SCZZ	1-104		N	C
PCOVP2122XHZZ	1-48	AK		C
PCUSG2138XHZZ	4-16	AD		C
PCUSS2120XHZZ	1-89	AB		C
PGIDM2529XHZZ	1-40	AD		C
PGIDM2530XHZZ	1-41	AD		C
PGIDM2531XHZZ	1-36	AD		C
PGIDM2532XHZZ	1-37	AD		C
PGIDM2533XHSC	2-5	AD		C
PGIDM2533XHSE	2-5	AD		C
PGIDM2534XHSC	2-6	AD		C
PGIDM2534XHSE	2-6	AD		C
PGIDM2535XHSC	2-35	AC		C
PGIDM2536XHZZ	4-13	AK		C
PGIDM2537XHZA	2-9	AF		C
PGIDM2538XHZZ	1-8	AM		C
PGUMR2160XHZZ	2-12	AE		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
PHOP-2101XHSC	2-33	AH		C
PHOP-2101XHSE	2-33	AH		C
PHOP-2102XHZZ	6-8	AE		C
PRBNN2015SCZZ	6-23	AQ		S
PSEL-2015XHZZ	2-30	AB		C
PSHEZ3293XHZZ	2-31	AH		C
PSHEZ3410XHZZ	1-87	AB		C
PSHEZ3429XHZZ	1-90	AD		C
PSHEZ3431XHZZ	2-32	AC		C
PSHEZ3432XHZZ	1-95	AE		C
PSHEZ3443XHZZ	1-29	AE		C
PSHEZ3544XHZZ	3-9	AD		C
PSHEZ3575XHZZ	1-102	AK		C
[Q]				
QACCD2027XHZZ	1-49	AR		B
QCNCM2401SC0B	7-104	AA		C
QCNCM2442SC0B	7-99	AB		C
QCNCM2575SC0H	7-103	AF		C
QCNCM2575SC1D	7-100	AC		C
QCNCM7014SC0F	7-101	AB		C
QCNCM7014SC0G	7-98	AB		C
QCNCM7014SC1E	7-102	AC		C
QCNCM7014SC1F	7-105	AD		C
QCNCW2509SC1D	8-33	AF		C
QCNW-231AXHZZ	1-2	AG		C
″	3-8	AG		C
QCNW-289ASCOW	6-14	AG		C
QCNW-290ASCZZ	6-13	AE		C
QCNW-350AXHZZ	4-15	AD		C
QCNW-351AXHZZ	1-103	AD		C
QCNW-3976XHBG	6-14	AK		C
QCNW-460AXHZZ	1-50	AE	N	C
QCNW-4933XHZZ	5-28	AC		C
QCNW-4936XHZZ	1-38	AN		C
QCNW-4939XHZZ	1-42	AF		C
QFS-P2010SCZZ	7-113	AD		B
QJAKZ2069SCBB	8-34	AG		C
QJAKZ2079XH0D	8-32	AD		C
QSOCZ2051SC32	7-119	AC		C
QSW-F2224SCZZ	5-29	AE		B
QSW-K0005AWZZ	3-12	AC		C
″	10-1	AC		C
QSW-M2259XHZZ	7-221	AF		B
QSW-M2281XHZZ	3-10	AP		C
″	10-2	AP		C
QSW-M2282XHZZ	3-11	AP		C
″	10-3	AP		C
QSW-Z2263XHZZ	8-37	AG		B
[R]				
RC-FZ3024SCZZ	8-2	AG		C
RCILZ2145XHZZ	7-128	AF		C
RCORF2125XHZZ	1-51	AE		B
RCRSB0297AFZZ	7-223	AD		B
RCRSQ2157SCZZ	7-222	AF		B
RDENT2155XHZZ	1-88	BD		E
″	9-901	BD		E
RH-IX2168SCZZ	7-115	BB		B
RH-IX2232XHZZ	7-120	AK	N	B
RHEDZ2062XHZZ	1-39	BN		B
RMOTZ2145XHZZ	5-30	BA		B
RR-TZ3017SCZZ	7-215	AC		C
″	7-216	AC		C
RR-TZ3018SCZZ	7-214	AC		C
″	7-217	AC		C
″	7-218	AC		C
RR-TZ3029SCZZ	7-213	AB		C
RRLYD3130SCZZ	7-220	AN		B
RRLYD3433XHZZ	8-31	AH		B
RTRNI2164XHZZ	8-79	AG		B
RUNTZ2060XHZZ	1-43	BK		B
[S]				
SPAKA480AXHZZ	6-12	AG		D
SPAKA481AXHZA	6-11	AG		D
SPAKA489AXHZZ	6-10	AD		D
SPAKA490AXHZZ	6-9	AD		D
SPAKC320CXHTZ	6-1		N	D
SPAKC375CXHTZ	6-1		N	D
SPAKC400CXHTZ	6-1		N	D
SPAKP3385SCZZ	6-18	AG		D

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
[T]				
TCADH3090XHZZ	6-30	AF	N	D
TCADZ2889XHZZ	6-25	AE		D
TCADZ2891XHZZ	6-26	AF		D
TCADZ3045XHZZ	6-27	AD		D
TCADZ3142XHZZ	6-24		N	D
TCADZ3167XHZZ	6-31		N	D
TCADZ3168XHZZ	6-32		N	D
TINSE4176XHTZ	6-3	AW	N	D
TINSK4189XHTZ	6-3		N	D
TINSS4204XHTZ	6-3		N	D
TLABH212AXHZZ	6-22	AU		D
TLABH220AXHZZ	6-22	AB		D
TLABH447BXHZZ	6-28	AC		D
TLABH4751XHZZ	6-4	AC		D
TLABH4752XHZZ	6-6	AB		D
TLABH480AXHZA	6-4	AD		D
TLABH4853XHZZ	6-21	AC		D
TLABH4936XHZZ	6-4	AD		D
TLABH4937XHZZ	6-21	AZ		D
TLABM342BXHZZ	6-29	AD		D
TLABM403CXHZZ	6-17		N	D
TLABM417CXHZZ	6-17		N	D
[U]				
UBATL2049SCZZ	7-1	AF		B
[V]				
VCCCCY1HH101J	7-24	AA		C
″	7-25	AA		C
″	7-31	AA		C
″	7-40	AA		C
″	7-41	AA		C
″	7-42	AA		C
″	7-50	AA		C
″	7-51	AA		C
″	7-52	AA		C
″	7-53	AA		C
″	7-54	AA		C
″	7-55	AA		C
″	7-56	AA		C
″	7-57	AA		C
″	7-58	AA		C
VCCCCY1HH150J	7-60	AB		C
VCCCCY1HH180J	7-44	AA		C
VCCCCY1HH220J	7-63	AA		C
″	7-81	AA		C
VCCCCY1HH221J	8-23	AA		C
″	8-25	AA		C
VCCCCY1HH330J	8-19	AA		C
″	8-28	AA		C
VCEAGA0JW227M	7-2	AD		C
″	7-4	AD		C
″	7-8	AD		C
VCEAGA1EW476M	7-3	AA		C
″	7-13	AA		C
VCEAGA1HW106M	7-5	AA		C
″	7-6	AA		C
″	7-7	AA		C
″	7-9	AA		C
″	8-4	AA		C
VCEAGA1HW107M	7-10	AA		C
″	7-11	AA		C
VCEAGA1HW226M	7-12	AB		C
″	8-3	AB		C
″	8-6	AB		C
″	8-7	AB		C
″	8-8	AB		C
″	8-9	AB		C
VCEAGA1HW475M	8-5	AA		C
VCKYCY1AF105Z	7-21	AC		C
″	7-45	AC		C
″	7-46	AC		C
″	7-47	AC		C
″	7-48	AC		C
″	7-49	AC		C
″	7-61	AC		C
″	7-64	AC		C
″	7-65	AC		C
″	7-66	AC		C
″	7-69	AC		C
″	7-74	AC		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VCKYCY1AF105Z	7-75	AC		C
″	7-76	AC		C
″	7-77	AC		C
″	7-78	AC		C
″	7-80	AC		C
″	7-82	AC		C
″	7-83	AC		C
″	7-86	AC		C
″	7-88	AC		C
″	7-89	AC		C
″	7-90	AC		C
″	7-91	AC		C
″	7-94	AC		C
″	7-95	AC		C
VCKYCY1CB104K	7-73	AB		C
″	7-92	AB		C
″	7-93	AB		C
VCKYCY1EB393K	8-14	AB		C
VCKYCY1EF104Z	7-14	AA		C
″	7-15	AA		C
″	7-17	AA		C
″	7-23	AA		C
″	7-27	AA		C
″	7-29	AA		C
″	7-39	AA		C
″	7-59	AA		C
″	7-62	AA		C
″	7-70	AA		C
″	7-71	AA		C
″	7-72	AA		C
″	7-97	AA		C
″	8-13	AA		C
″	8-22	AA		C
VCKYCY1HB102K	7-18	AA		C
″	7-19	AA		C
″	7-20	AA		C
″	7-26	AA		C
″	7-32	AA		C
″	7-33	AA		C
″	7-34	AA		C
″	7-35	AA		C
″	7-36	AA		C
″	7-37	AA		C
″	7-38	AA		C
″	7-87	AA		C
″	8-16	AA		C
″	8-18	AA		C
″	8-24	AA		C
VCKYCY1HB103K	7-43	AA		C
″	7-79	AA		C
VCKYCY1HB221K	7-22	AB		C
VCKYCY1HB222K	8-11	AA		C
″	8-12	AA		C
VCKYCY1HB392K	8-17	AA		C
VCKYCY1HB472K	7-28	AA		C
VCKYCY1HB821K	8-30	AA		C
VCKYPA1HB103K	8-10	AA		C
VCKYTQ1HB102K	8-15	AA		C
VCKYTV1CF105Z	8-20	AB		C
″	8-21	AB		C
VCKYTV1HF104Z	7-16	AA		C
″	7-96	AA		C
″	8-26	AA		C
″	8-27	AA		C
″	8-29	AA		C
VHDDSS133//-1	8-35	AA		B
″	8-36	AA		B
VHDHRW0202B-1	7-111	AD		B
VHD02DZ5R1Y-1	7-112	AC		B
VHD1SS355//-1	7-107	AB		B
″	7-108	AB		B
″	7-109	AB		B
″	7-110	AB		B
VHEHZ2C1///-1	8-82	AA		B
″	8-83	AA		B
″	8-85	AA		B
″	8-86	AA		B
VHEHZ27-1//-1	8-84	AB		B
VHE1N4748A/-1	7-106	AC		B
VHIKID65001AP	7-116	AE	N	B

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VHIKM29W040-1	7-118	AV		B
VHINJM2113M-1	7-117	AG		B
VHINJM2904M-2	8-38	AG		B
″	8-39	AG		B
VHISCE114V/-1	7-121	BQ	N	B
″	7-122	BQ	N	B
VHIW24L257S7L	7-114	AC		B
VHI27020FQM0B	7-119		N	B
VHI27020FQN0B	7-119		N	B
VHI27020FQP0A	7-119		N	B
VHI62FP332P-1	7-219	AF		B
VHPPC814X//-1	8-41	AE		B
VHPSG206S//-1	7-131	AG		B
″	8-43	AG		B
VHPTLP521-1BL	8-42	AE		B
VHVERZV5D471/	8-80	AC		B
″	8-81	AC		B
VHVRA391PV6-1	8-1	AE		B
VRD-HT2EY300J	8-50	AA		C
VRD-HT2EY910J	8-48	AA		C
VRD-HT2HY223J	8-47	AA		C
VRS-CY1JB000J	7-30	AA		C
″	7-67	AA		C
″	7-68	AA		C
″	7-84	AA		C
″	7-85	AA		C
″	7-145	AA		C
″	7-168	AA		C
″	7-173	AA		C
″	7-180	AA		C
″	7-181	AA		C
″	7-182	AA		C
″	7-183	AA		C
″	7-185	AA		C
″	7-191	AA		C
″	7-192	AA		C
″	7-194	AA		C
″	7-209	AA		C
″	8-40	AA		C
″	8-55	AA		C
″	8-62	AA		C
″	8-70	AA		C
VRS-CY1JB102J	7-150	AA		C
″	7-184	AA		C
″	7-186	AA		C
″	8-52	AA		C
VRS-CY1JB103J	7-141	AA		C
″	7-161	AA		C
″	7-166	AA		C
″	7-169	AA		C
″	7-190	AA		C
″	7-204	AA		C
″	7-211	AA		C
″	7-212	AA		C
VRS-CY1JB104J	7-156	AA		C
″	7-163	AA		C
″	7-202	AA		C
VRS-CY1JB105J	7-176	AA		C
VRS-CY1JB106J	7-188	AA		C
VRS-CY1JB113J	7-193	AA		C
VRS-CY1JB121J	7-172	AA		C
VRS-CY1JB125J	7-153	AA		C
VRS-CY1JB151J	7-177	AA		C
VRS-CY1JB152J	8-57	AA		C
VRS-CY1JB153J	7-149	AA		C
″	7-158	AA		C
″	7-164	AA		C
″	8-75	AA		C
VRS-CY1JB154J	7-146	AA		C
VRS-CY1JB164J	7-151	AA		C
VRS-CY1JB203J	7-165	AA		C
″	7-179	AA		C
″	8-54	AA		C
″	8-60	AA		C
″	8-67	AA		C
″	8-69	AA		C
VRS-CY1JB222J	7-195	AA		C
VRS-CY1JB223J	7-144	AA		C
″	7-178	AA		C
VRS-CY1JB224J	7-189	AA		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
VRS-CY1JB224J	8-74	AA		C
VRS-CY1JB271J	7-139	AA		C
〃	7-143	AA		C
〃	7-147	AA		C
〃	7-159	AA		C
〃	7-160	AA		C
〃	7-162	AA		C
〃	7-167	AA		C
〃	7-170	AA		C
〃	7-174	AA		C
〃	7-175	AA		C
〃	7-187	AA		C
〃	7-197	AA		C
VRS-CY1JB300J	7-140	AD		C
VRS-CY1JB301J	8-68	AA		C
VRS-CY1JB302J	7-157	AA		C
VRS-CY1JB332J	8-63	AA		C
〃	8-64	AA		C
〃	8-73	AA		C
〃	8-76	AA		C
VRS-CY1JB334J	7-152	AA		C
VRS-CY1JB393J	7-201	AA		C
〃	8-72	AA		C
VRS-CY1JB433J	8-61	AA		C
VRS-CY1JB471J	7-196	AA		C
〃	7-198	AA	N	C
VRS-CY1JB472J	7-200	AA		C
〃	7-203	AA		C
〃	8-65	AA		C
VRS-CY1JB473J	8-78	AA		C
VRS-CY1JB474J	7-154	AA		C
〃	7-171	AA		C
VRS-CY1JB512J	7-142	AA		C
〃	8-56	AA		C
VRS-CY1JB513J	7-205	AA		C
VRS-CY1JB562J	7-199	AA		C
VRS-CY1JB621J	8-58	AA		C
VRS-CY1JB623J	7-148	AA		C
VRS-CY1JB754J	7-155	AB		C
VRS-CY1JB822J	8-71	AA		C
VRS-RE3AA102J	8-49	AA		C
VRS-TS2AD000J	7-123	AA		C
〃	7-124	AA		C
〃	7-125	AA		C
〃	7-126	AA		C
〃	7-129	AA		C
〃	7-130	AA		C
〃	7-138	AA		C
〃	7-207	AA		C
〃	7-208	AA		C
〃	7-210	AA		C
VRS-TS2AD101J	8-59	AA		C
VRS-TS2AD102J	8-77	AA		C
VRS-TS2AD150J	7-127	AA		C
VRS-TS2AD151J	8-53	AA		C
VRS-TS2AD221J	7-206	AA		C
VRS-TS2AD223J	8-51	AA		C
VRSTS2AD8662F	8-66	AA		C
VSDTC143ZK/-1	8-45	AD		B
〃	8-46	AD		B
VSKRC102S//-1	7-134		N	B
〃	7-135		N	B
〃	7-136		N	B
VSKRC106S//-1	7-133	AD		B
VSKTA1504GR-1	7-132	AC		B
VS2SC2412KR-1	8-44	AD		B
VS2SC2412KS-1	7-137	AB		B
[X]				
XBBSD30P06000	1-B3	AA		C
XBPSN40P06K00	1-B4	AA		C
XEBSD20P06000	3-B1	AA		C
XEBSD30P08000	1-B7	AA		C
XEBSD30P10000	1-B2	AA		C
〃	2-B2	AA		C
〃	5-B2	AA		C
XHBSD30P05000	1-B5	AA		C
XHBSD30P06000	1-B6	AA		C
[0]				
0CBLRZ6581ZN/	9-29	AQ		C
0CBLRZ6686ZQ/	9-30	AQ		C

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK
0CBPCZ0273ZZ/	9-16	AH		C
0CBPJCSX2501/	9-25	AH		A
0CBPKZ0194ZZ/	9-17	AC		C
0CBPZZ0906ZZ/	9-26	AH		A
0CBUAC0034EZ/	9-34	AE		B
〃	9-35	AE		B
0CBUAC0264AZ/	9-33	AD		B
0CBUAG0161BZ/	9-32	AQ		B
0CBUBA0011AL/	9-22	AD		B
0CBUBC0125DK/	9-18	AD		B
〃	9-19	AD		B
〃	9-20	AD		B
〃	9-21	AD		B
0CBUBC0302AZ/	9-24	AE		B
0CBUBC0336AZ/	9-23	AL		B
0CBUBDAC6R2C/	9-60	AC		B
0CBUBDAE300D/	9-59	AD		B
0CBUBDBE4R3C/	9-58	AD		B
0CBUCB0196AZ/	9-27	AR		B
0CBUDC0062MZ/	9-31	AG		B
0CBUEEB101CS/	9-54	AC		C
0CBUEEB152CS/	9-47	AC		C
0CBUEEB181CS/	9-42	AC		C
0CBUEEB182CS/	9-51	AC		C
0CBUEEB184CS/	9-38	AC		C
0CBUEEB222CS/	9-50	AC		C
0CBUEEB271CS/	9-46	AC		C
0CBUEEB331CS/	9-39	AC		C
0CBUEEB332CF/	9-52	AC		C
〃	9-53	AC		C
0CBUEEB334CS/	9-48	AC		C
0CBUEEB471CS/	9-44	AC		C
0CBUEEB473CS/	9-41	AC		C
〃	9-43	AC		C
0CBUEEB562CS/	9-40	AC		C
0CBUEEB682CS/	9-49	AC		C
0CBUEEB824CS/	9-37	AC		C
0CBUEEC105CF/	9-36	AC		C
0CBUEFDR15DB/	9-45	AE		C
0CBUEZ0528ZZ/	9-56	AD		B
0CBUFBA471CB/	9-57	AD		B
0CBUGAE331TR/	9-8	AF		C
0CBUGAE331TS/	9-7	AH		C
0CBUGAL151SM/	9-2	AL		C
0CBUGCD104AP/	9-9	AD		C
〃	9-11	AD		C
0CBUGCM472BJ/	9-6	AF		C
0CBUGCU471JE/	9-3	AD		C
0CBUGFF102BQ/	9-12	AD		C
〃	9-14	AD		C
0CBUGFF104BQ/	9-10	AD		C
0CBUGFF152BQ/	9-13	AD		C
0CBUGFF222BQ/	9-4	AC		C
0CBUGFF331BQ/	9-15	AD		C
0CBUGFF472KX/	9-5	AC		C
0CBUGFM224KR/	9-1	AF		C
0CBUKZ0960ZZ/	9-28	AK		C
0CB829585033/	9-55	BE		B

PARTS CODE	No.	PRICE RANK	NEW MARK	PART RANK

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UX-485LU

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